DOCUMENT RESUME

ED 344 402 EC 301 131

TITLE	Challenges in Gifted Education: Developing Potential and Investing in Knowledge for the 21st Century.
INSTITUTION	Ohio State Dept. of Education, Columbus.
SPONS AGENCY	Department of Education, Washington, DC.
PUB DATE	Mar 92
NOTE	126p.; For individual papers, see EC 301 132-146.
PUB TYPE	Collected Works - General (020)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Ability Identification; Attitudes; Child Advocacy; Classroom Techniques; *Delivery Systems; Early Childhood Education; *Educational Change; Elementary Secondary Education; Ethnic Groups; *Gifted; Intelligence; Minority Groups; Program Administration; Program Effectiveness; Program Evaluation; School Community Relationship; *School Restructuring; *Special Education; Talent Identification
IDENTIFIERS	*Ohio

ABSTRACT

The 15 chapters of this book examine major issues in gifted education today, the role of gifted education in the educational reform movement, and the development of gifted education in Ohio. After an introductory chapter by Elyse S. Fleming, chapters have the following titles and authors: "The Shadow of the Future: Serving Ohio's Gifted Students" (Thomas M. Stephens); "Gifted Students and Educational Reform" (James J. Gallagher); "Conceptions of Intelligence and Giftedness" (Marlene Bireley); "Identification of Underserved Populations: Focus on Preschool and Primary Children" (Beverly D. Shaklee and Susan Hansford); "Ethnic/Minority Children: Reflections and Directions" (Mary M. Frasier); "School Reform and Restructuring: Relationship to Gifted Education" (Mark O. Stevens); "School Restructuring: Impact on Attitudes, Advocacy, and Educational Opportunities for Gifted and Talented Students" (Roselyn Frank); "Community Links as Resources" (Patricia A. Kleine and James T. Webb); "Collaboratively Planning and Delivering Services to Gifted and Talented Students" (Beverly N. Parke); "Local Administration of Programs for the Gifted and Talented" (Douglas Sebring and Dan Tussey); "Classroom Strategies for Meeting Multiple Needs: A Five-Step Model" (Deborah S. Delisle and James R. Delisle); "Residential, Regional, and Specialized Schools" (Raymond H. Swassing and George R. Fichter); "Lead Us Not Into Temptation: Issues in Evaluating the Effectiveness of Gifted Programs" (W. Thomas Southern); "Determining the Effectiveness of Educational Services: Assessment Issues" (Carolyn M. Callahan); "Gifted Children: Making the Year 2000 Theirs" (Frederick J. Weintraub). (DB)

Challenges in Gifted Education

Developing Potential and Investing in Knowledge for the 21st Century

...of Education

Ohio Department of Education
933 High Street
Worthington, OH 43085-4087

1992

Contents

TED SANDERS
SUPERINTENDENT OF
PUBLIC INSTRUCTION

STATE OF OHIO
DEPARTMENT OF EDUCATION
COLUMBUS
43266-0308

March 1992

A dramatic decline in academic performance over the past two decades has affected our brightest youngsters. That fact, coupled with national concern over productivity in America, has spurred renewed interest in assuring appropriate educational opportunities for all students, including the gifted and talented. Restructuring and reform movements are calling for fundamental and comprehensive transformation of the traditional school organization.

Challenges in Gifted Education: Developing Potential and Investing in Knowledge for the 21st Century is a publication that will stimulate thinking and serve as a resource to all educators for future changes. In each of the chapters, respected academicians have examined current issues in gifted education and have proposed recommendations worthy of implementation.

I express my sincere appreciation to the many individuals who contributed to this effort: to the members of the Gifted Publication Liaison Committee who identified the issues to be addressed; to the authors who so willingly gave their time to research and write timely, relevant, and thought-provoking content; and to Nancy Hamant and Deborah Telfer, consultants in the Division of Special Education, and Arlene Baker, editorial consultant, who spent many hours reviewing the manuscript and preparing it for final publication.

As educators implement the recommendations included in *Challenges in Gifted Education*, all students, including those identified as gifted and talented, will benefit from improved opportunities. This will be an important step in reversing the trend toward diminishing academic achievement.

Sincerely,

Ted Sanders
Superintendent of Public Instruction

Preface

In April 1991, Raymond A. Horn, assistant superintendent of public instruction, Ohio Department of Education, addressed the annual meeting of the Consortium of Ohio Coordinators for the Gifted. He noted that the 40th anniversary of the establishment of the Ohio Association for Gifted Children (OAGC) and the 30th anniversary of the publication of *Attention to the Gifted: A Decade Later,* a joint effort of the Department and the OAGC, was one year hence. From the time of the publication of *Attention to the Gifted* in 1962 to the authorization of this 1992 publication, Dr. Horn has maintained a vision of educational services for gifted students and has provided leadership for the development of those services.

National concern about the documented decline in the achievement of our nation's brightest students, as well as the relatively dismal performance of our most able students in mathematics and science when compared on an international scale, present an imperative for educational reform at all levels. This publication captures the vision of highly-respected individuals in the field of gifted education who present their views on the development of gifted education in Ohio and the vital role of gifted education in the reform movement.

In July 1991, the Gifted Publication Liaison Committee was convened by the Division of Special Education. The committee identified current issues in the field and suggested renowned academicians to address each of the issues. The research, insights, and contributions of these academicians comprise the chapters of this publication.

Gifted Publication Liaison Committee

Susan Amidon, supervisor, Columbus City School District; president-elect, Consortium of the Ohio Coordinators for the Gifted

Patsy Ciaciuch, special education supervisor, Lucas County Office of Education

Sheila Brown, coordinator, Hamilton County Office of Education

Susan Buckbee, coordinator, Summit County Office of Education

Sharon Buzzard, coordinator, East Liverpool City School District; president-elect, Ohio Association for Gifted Children

Sharon Graves, coordinator, Muskingum County Office of Education

Nancy Hamant, consultant, programs for gifted children, Division of Special Education, Ohio Department of Education

Susan Hansford, coordinator, Cleveland Heights-University Heights City School District

Patricia Holcomb, coordinator, Westerville City School District; past president, Ohio Association for Gifted Children

Susan Huber, coordinator, Hancock County Office of Education; past president, Consortium of Ohio Coordinators for the Gifted

Frank New, director of interagency planning and special projects, Franklin County Board of Mental Retardation and Developmental Disabilities

Douglas Sebring, assistant superintendent, North Olmsted City School District; president, Ohio Association for Gifted Children

Lou Teyler, coordinator, Orange City School District

Dan Tussey, coordinator, Reynoldsburg City School District; president, Consortium of Ohio Coordinators for the Gifted

Publication and Dissemination

Challenges in Gifted Education: Developing Potential and Investing in Knowledge for the 21st Century includes chapters by national and regional leaders in the field of gifted education. The authors responded willingly to the Ohio Department of Education's invitation to address the current status of educational opportunities for gifted children and to project future needs and directions. Final editing was completed in early 1992, and the book was published by the Ohio Department of Education in March 1992. Copies were made available to all school districts, to the Ohio Association for Gifted Children, and to the Consortium of Ohio Coordinators for the Gifted.

Purpose

The purpose of *Challenges in Gifted Education* is to assist Ohio educators and parents with the development and implementation of appropriate services for all gifted children. *Challenges in Gifted Education* analyzes educational issues in serving gifted children and provides insights and recommendations that support a continuum of district-level services. This publication, along with *Interacting for Quality Learning: A Gifted Education Strategic Plan for the 1990's,* provides a blueprint for the 21st Century.

Introduction

Elyse S. Fleming — *Professor of Education* and *Director, Doctoral Program in Urban Education, Cleveland State University*

This publication marks the 30th anniversary since *Attention to the Gifted: A Decade Later* was published in 1962. *Attention to the Gifted* was a jointly sponsored commemorative monograph honoring the close cooperation between the Ohio Association for Gifted Children (OAGC) and the Ohio Department of Education and celebrating the progress that had been made in recognizing the needs of gifted children over the 10 preceding years since the formation of the OAGC. National and regional leaders in the gifted field at that time were invited to contribute their perspectives on this developing area of interest. Luminaries who played prominent roles on the national scene in making a difference for gifted children — pioneers like A. Harry Passow, E. Paul Torrance, and Paul A. Witty — joined with Ohio educators to produce the 1962 publication.

If I may be permitted a personal note, the piece that I contributed to that document was actually my first professional publication, and I was particularly honored to be included with such an illustrious group of educators. The occasion of the 30th anniversary of that publication and the 40th anniversary of gifted education programs in Ohio marks another benchmark for me. As I now approach retirement, this introduction, though certainly not an indication of any future vow of silence, will be close to the last of those articles appearing under my name before emeritus status is conferred.

These milestones in my own lifetime over the ensuing 30 years provide a unique opportunity to review the sweep of historical events that have brought Ohio to its present point in gifted education. In reviewing the 1962 publication and reading the new material written for this 1992 publication, I am struck by both constancy and change that characterize the field.

The Cleveland Major Work Program, which celebrates its 70th anniversary this year, continues to be the longest running program for the gifted in the country. While the field of gifted education has become increasingly sophisticated, many issues have yet to be fully resolved. Questions regarding who the gifted are and how they should be served still abound. Concerns continue to be raised regarding how best to meet the affective needs of the gifted in terms of their feelings about self, about their futures, and about being "different."

Educators still wrestle with issues about the most efficacious administrative arrangements to provide for the best possible program delivery. Although couched in contemporary language, homogeneous v. heterogeneous grouping arrangements and the nature of enriching experiences continue to preoccupy our concerns. Educators still debate what characteristics teachers of the gifted should possess and how they should be prepared to provide the best possible instruction. And educators still have not determined which content from what disciplines should be included in programs for the gifted. Anxiety over the potential loss of national prominence persists today, although the emphasis has shifted from concerns with military threats to economic ones, and American prominence is a constant theme as successive generations address the roles that gifted and talented youth are expected to play in our national destiny.

Change is also an impressive feature of the sweep of events in the history of gifted education in the nation and in the state of Ohio over these past 30 years. Indeed, much progress has been made. Examples of the increased sophistication of the field are curricula especially designed for the gifted. But when parents and professionals are so deeply immersed in the press of the moment, they can be overwhelmed by a sense of frustration at how insoluble the problems appear to be and how very much farther they need to go. Looking back, there is much to inspire pride. For example, the definition of giftedness has expanded far beyond the Binet IQ of 125 that was the operative cut-off for inclusion into programs for the gifted in the 1960s. Today, state and national definitions of giftedness have expanded, becoming more inclusive with the addition of such gifts as creativity and the visual and performing arts.

Professionals in the field of gifted education have learned so much more about the nature and complexity of human abilities and cognitive processes, about problem solving, and about critical and creative thinking. They have learned a good deal more about issues in the life span development of the gifted beyond that which Lewis M. Terman provided. They have just begun to recognize the vast talents hidden or overlooked in so many underserved groups: minorities, females, the disabled, and young children in urban, rural, and suburban settings. Technical knowledge about appropriate ways to evaluate program outcomes so that they may be refined and improved was virtually unavailable in 1962. Building partnerships and organizing advocacy groups were limited to those small devoted bands of parents and teachers working in virtual isolation for the special needs of their children.

The adoption of a state rule specifying definitions and programming options, systematic identification procedures for statewide child finds, and the very existence of certificate validation for teaching the gifted were not dreamed of in 1962. The contribution of so many dedicated parents, professionals, and legislators to making these proposals a reality cannot be recounted, nor can gratitude be expressed to all who made these changes happen. What follows in this publication is an impressive display of progress.

Thomas Stephens, also a contributor to both this publication and the 1962 publication, begins with an overview of historical benchmarks in legal authority, personnel preparation, public awareness, and psychometrics. As the first state supervisor of gifted education in Ohio, Dr. Stephens is in a unique position to take the reader from the foundations of gifted education in Ohio to the recent state strategic plan for gifted education for the 1990s to a challenging series of proposals for building a responsive future for all of our children. *James Gallagher* follows with a treatment of controversial issues in gifted education, including those of grouping, values, and curricular content now being impacted by the educational reform movement.

Marlene Bireley presents some of the newer and increasingly complex notions about intelligence and giftedness provided by Gardner, Sternberg, and Das as she traces the contributions of their cognitive, developmental, and neuropsychological insights. Attention to the underserved group of young children in preschool and primary grades is provided by *Beverly Shaklee* and *Susan Hansford* who discuss student identification through the use of exciting new portfolio assessment strategies. Special needs and concerns of underserved ethnic minorities and poor children, so long neglected, are highlighted by *Mary Frasier.*

Mark Stevens introduces the topic of school restructuring and discusses how futurists, business leaders, and educators together can persuasively argue for restructuring relationships to bring about necessary school reform in the currently difficult economic environment. Concern with wider horizons also characterizes *Roselyn Frank's* review of our changing society, its children and families, and the world of work which can pave the way for restructuring schools. She places particular emphasis on promoting advocacy through the involvement of families, community members, and business in true partnerships with schools. Those same community links are identified by *Patricia Kleine* and *James Webb* as specifically related to meeting the affective needs of gifted youth. They suggest ways that parents and the community can provide support through increased knowledge about such resources as mentorships and available legal options as well as working toward the improved training of professionals who work with the gifted. To achieve goals that will bring full service delivery models to fruition, *Beverly Parke* details the processes of collaboration in which all stakeholders in the gifted program must engage throughout the student selection, program design, program placement, curriculum, and evaluation stages of program implementation.

Doug Sebring and *Dan Tussey* provide important administrative perspectives as they enumerate the responsibilities of administrators of programs for the gifted at the local level in dealing with program philosophy, politics, staff development, program image, program evaluation, and articulation between general and gifted education personnel. *Deborah Delisle* and *James Delisle* focus on infusing a five-step model for enhanced learning into the regular classroom for the benefit of all children and their teachers as implementers. Educational options are described by *Ray Swassing* and *George Fichter* as they trace the history of residential, regional, and specialized schools for the gifted and talented.

Tom Southern reviews some of the critical political and philosophical issues attendant to program evaluation and emphasizes the importance of good evaluation data. *Carolyn Callahan* elaborates on the topic of program evaluation as she not only specifies the ways traditional measures are often inappropriate for measuring desired outcomes but also offers suggestions for more innovative approaches to discovering whether or not programs are making a difference in the lives of gifted students. Lastly, *Fred Weintraub* provides a manifesto for collective action to assure the delivery of appropriate services for the gifted and talented in the year 2000.

The Shadow of the Future: Serving Ohio's Gifted Students

Thomas M. Stephens — *Professor and Associate Dean, College of Education, The Ohio State University*

Introduction

In this chapter, the present conditions of gifted education, both nationally and in Ohio, are related to the history of the gifted education movement. Ohio already has a range of comprehensive programs for its gifted and talented students. However, these programs are uneven across the state. Specific suggestions are proposed in this chapter to further improve Ohio's programs. These actions need to be taken to better meet the needs of both its gifted and talented populations and to meet the economic needs of its citizens.

Ohio's future economic conditions are related to the quality of its schools and, in particular, to the state's investment in its gifted and talented students. The extent of this investment will shape the economic lives of Ohioans in the next century.

The Shadow of the Future

Any discussion of gifted education must recognize the context in which public education exists. What is that context?

In a democracy, public education reflects its citizens' values, desires, and societal priorities. Although there may be some lag time between what the public wants and what it gets, the collective's wishes are eventually met. Presently, it appears that the majority in our country want a better life for their children but are reluctant to make the sacrifices that are related to hard work and the foregoing of immediate pleasures.

Teachers who care about all students and the society in which they will live have a moral obligation to teach the importance of human and material investments and to deemphasize wasteful consumption. Investments in brainpower create wealth and jobs and improve the nation's human and material resources. Overconsumption neglects human abilities and fritters away precious time. An emphasis on wasteful consumption of time can be seen in our overwhelming interest in entertainment. Diversions are the driving force behind superficial thinking and rejection of learning. As Postman (1985) noted, we are "amusing ourselves to death."

Neglecting our brightest students is wasteful because squandering our human and material resources results in a lower quality of life, both materially and culturally. Felix Rohatyn, author of *The Twenty-first Century* and chairman of the Municipal Assistance Corporation of New York City, vividly described in economic terms the results of our educational failures. "By the year 2000, Germany and Japan will certainly qualify as superpowers so far as both industrial and financial strength are concerned. The United States, if we continue on our present path, may qualify only as a military superpower" (Rohatyn, 1991, p. 8).

And what is our present education path? It is a failure to invest in knowledge (Rohatyn, 1991). For example, in the last 25 years, there has been a 40% decline in the proportion of students scoring over 600 on the Scholastic Aptitude Test. This fact reflects "the other crisis" in education (Singal, 1991).

Knowledge investment begins with a heavy emphasis on those students who are potentially most likely to be educationally successful. In order to

make the necessary investment in potentially able students, elected officials and policy makers need the advice of education professionals who know how to locate able students at an early age; who can create effective instruction for this target group; and who can deliver that instruction in a cost-effective, efficient manner. Most importantly, educators have direct access to students and their parents.

Historical Perspective

In our nation's educational history, there have been several periods in which we attended to our able students. These were relatively short periods, but they were times in which educators did not always fully possess the instructional technology needed to achieve their goals. Even without the focused attention to gifted education, development of the conditions necessary for gifted education has been continual. This development can be seen in the testing and identification streams in Figure 1, in the ongoing development of educational programs, in the legal authorization of programs, in personnel preparation, and in the garnering of political support through public awareness.

Figure 1 shows the historical context of gifted education and how it evolved in Ohio and in the country. This history reflects two pervasive assumptions: (1) that the primary source of human ability is genetic and (2) that this ability can be measured precisely with aptitude tests. These two assumptions not only set the parameters for the types of youngsters who were identified as "gifted" but also helped determine the nature of the educational programs in which they were to be served.

In 1925, Lewis Terman published the first of his five-volume study titled *Genetic Studies of Genius*. Terman and his associates followed over 1,000 gifted California students throughout their school years and through mid-life. Because of the impact of the longitudinal study, Terman's influence permeated most of the thinking in the United States about giftedness well into the 1960s. The Terman study diminished some of the stereotypes about gifted students, such as limited physical capacities, early burnout, and social ineptness.

Earlier in this century, when child developmental theories were widely held, there was a consistent framework for gifted education. This framework was based, in part, on the now largely dismissed notion of fixed intelligence and the unfolding of physical attributes (Fancher, 1985). These beliefs were also major forces in the extensive development of tests and identification. Today, few argue that the *potential* for high ability is not inherited. Rather, the disagreements are about the sources of the inheritance, biological or environmental, and the proportions of each (Plomin, 1989; Husen & Tuijnman, 1991).

By casting "giftedness" solely in terms of genetically inherited abilities, early 20th Century advocates unwittingly created a barrier of opposition toward special attention for able students among many public school educators and citizens. Charges of elitism resonate to this day among legislators, policy makers, school administrators, and the general public. Some would argue that because these abilities are genetically driven, there is little need for special attention; gifted students will achieve irrespective of the quality of education.

In 1967, Guilford's *Structure of Intellect* changed forever the nature-nurture arguments. Building on L.L. Thurstone's concept of primary mental abilities, Guilford identified 120 separate categories of intellect. Furthermore, he suggested a scientific basis for teaching to these abilities. His

Figure 1
Historical Context of Gifted Education in the United States and Ohio

Educational Programs	1882 — G. Stanley Hall established psychology laboratory at Johns Hopkins and laid the foundation for child development as the basis for school curriculum.	1911 — National survey found that 6% of cities had special classes for gifted students.	1922 — Cleveland started the Major Work Program, the earliest continuous program for the gifted in the nation. Dorothy Norris was the first teacher and later was the program director.
	1926 — Teaching machine and programmed instruction prototype were developed by Sidney Pressey at The *Ohio* State University.	1951 — Dorothy Norris chaired *Ohio's* statewide committee on gifted education.	1951 — State survey showed that 2% of *Ohio's* schools had special classes and 9% had enrichment programs.
	1959 — Sixteen percent of *Ohio's* schools had programs for the gifted.	1960 — State survey showed 2% of all students in *Ohio's* public schools were gifted.	1960 — *Ohio's* first state-level supervisor of gifted was employed.
	1976 — The *Ohio* State University hosted a week-long school for gifted high school juniors to celebrate the Bicentennial Year.	1977 — The *Ohio* State University hosted the annual Martin W. Essex School for gifted high school juniors. Sixty students from the state attended.	1986 — *Ohio* began the annual summer Institute for gifted high school students on university campuses throughout the state.
Legal Authority	1791 — Tenth Amendment to the U.S. Constitution reserved education to the states.	1840 — Rhode Island was the first state to enact a compulsory attendance law.	1918 — Compulsory attendance was required in all states.
	1959 — *Ohio* amended law to provide for state leadership for academically gifted children.	1963 — *Ohio* Department of Education's position of supervisor of programs for the gifted was eliminated due to state budget reductions.	1967 — *Ohio* laws permitted funding experimental programs for academically gifted students.
	1967 — *Ohio* authorized early admissions to school for kindergarten and first grade students.	1975 — After a 12-year hiatus, the *Ohio* Department of Education employed a supervisor of gifted programs.	1987 — *Ohio* enacted legislation mandating the identification of all gifted children.
	1988 — The Jacob K. Javits Gifted and Talented Students Education Act authorized the U.S. Department of Education to provide funds to encourage research, demonstrations, and personnel training.		

Figure 1 (cont.)

Personnel Preparation	1920 — The National Society for the Study of Education published the first of three yearbooks about educating the gifted. Other yearbooks were published in 1924 and 1979.	1922 — At Teacher's College, Columbia, Leta Hollingsworth taught the first college course devoted solely to teaching gifted children.	1924 — Louise Stedman published the first textbook on teaching gifted students, *Education of Gifted Children.*
	1926 — Leta Hollingsworth published *Gifted Children: Their Nature and Nurture.*	1942 — Leta Hollingsworth published *Children Above 180 IQ: Origin and Development.*	1951 — The first institute for research on exceptional children was opened at the University of Illinois with Samuel Kirk as director.
	1951 — Paul Witty edited *The Gifted Child,* a widely used textbook in personnel preparation.		
Public Awareness	1785 — Thomas Jefferson addressed the question of racial differences in intelligence.	1867 — Congress established the national Department of Education.	1922 — The Council for Exceptional Children was formed.
	1930 — Lewis M. Terman served as chairman of the subcommittee on the gifted of the White House Conference on Child Health and Protection.	1931 — The U.S. Office of Education formed a section on exceptional children.	1941 — The National Society for the Study of Education issued a yearbook on the education of exceptional children.
	1946 — The American Association for the Gifted was formed by Pauline Brooks Williamson and Ruth Strong.	1950s — Reemergence of hereditarians believed that intelligence was innate.	1957 — The Soviet Union launched Sputnik.
Testing and Identification	1890 — James McKeen Cattell advocated the standardization of methods and norms of psychological testing.	1905 — E.L. Thorndike devised a standardized test to measure educational achievement.	1905 — The French psychologist, Alfred Binet, created the first widely used intelligence test.
	1905 — Henry H. Goddard translated and published the Binet tests for use in the U.S.	1905 — Charles Spearman, an English psychologist, established the principle of *general intelligence (g).* "All intelligence starts with the g factor."	1910 — Goddard published an American standardization of the Binet Scale.

Figure 1 (cont.)

Testing and Identification (cont.)	1912 — William Stern, a German psychologist, invented the concept of the intelligence quotient (mental age/chronological age).	1915 — Robert Yerkes published a test of intelligence using a point-scale, which later was adopted by David Wechsler.	1915 — S.D. Porteus published a series of motor-intellectual mazes to counter Binet's emphasis on previous learning.
	1916 — Terman standardized the American version of Binet's intelligence test, the Stanford-Binet, and used the IQ concept.	1917 — U.S. entered World War I; psychologists developed group tests for sorting, assigning, and classifying personnel. The Army Alpha Test for literates and the Army Beta Test for non-English speaking persons were developed.	1921 — Terman began *Genetic Studies of Genius* and published the results of the longitudinal study in five volumes from 1925 to 1959.
	1923 — The Stanford Achievement Test, an achievement test for grades K-3, was published by Terman and associates.	1928 — Otto Klineberg reported the results of a study that began awareness of the cultural bias of tests.	1939 — Wechsler published the Wechsler Bellevue Scale using the point-scale method and creating the *deviation IQ's*.
	1967 — J.P. Guilford published *Structure of Intellect*, emphasizing creative thinking and teaching intelligence.	1972 — The U.S. Office of Education formulated a definition to identify gifted and talented youth.	1985 — Raymond Fancher published *The Intelligence Men: Makers of IQ Controversy*.

message was clear: Good instruction can improve thinking abilities. Thus, while many gifted educators had long believed that intelligence could be improved, Guilford provided a model for such instruction (Guilford, 1967; Meeker, 1969).

In 1962, the leading authorities in gifted education in Ohio addressed these types of issues (Barbe & Stephens, 1962). All of the contributors to the state publication, *Attention to the Gifted: A Decade Later,* were optimistic that the public and its schools, at long last, had recognized the importance of its able students. Just five years earlier, the Soviet Union had launched Sputnik and our nation was eager to catch up. What better way than to invest in young, able minds? Most people agreed that our future as a world power required that we find and use brainpower.

Federal Support

Many advocates saw the politics of the times as an opportunity to create a national force for gifted education. But by the mid-1960s, political attention shifted to the underclasses, those who were economically and educationally disenfranchised. Other events that drained the nation's resources, such as

the Vietnam War, soon overtook the budding gifted education movement. Our nation seemed incapable of maintaining multiple initiatives. Still, in 1970, the U.S. Congress passed the Education Act of 1969, which included provisions for gifted and talented children. The law required that the U.S. Commissioner of Education study the needs of gifted and talented children and make recommendations (Marland, 1972). Consequently, the Marland Report laid the foundation for the present 20-plus year period of growth in gifted education.

During the late 1970s and into the 1980s, virtually no federal funding was available for educating gifted students. To the extent that programs were developed, they were funded at the local and state levels. Subsequent financial support by the federal government has been penurious.

The Elementary and Secondary Education Act of 1965 was amended in 1988. This amendment authorized the Gifted and Talented Program in the U.S. Department of Education to provide financial assistance to state and local education entities, institutions of higher education, and other public and private agencies to help with the education of able youth. Under this amendment, titled the Jacob K. Javits Gifted and Talented Students Education Act, 41 grants and a five-year contract for a National Research Center have been funded as of this writing.

Because of level funding, no new grants were awarded in fiscal year 1991. No new funding was provided by a congress and an administration that supposedly had a "peace dividend" due to the end of the "cold war." The federal government's inattention to the nation's most valuable resources should have been a cause for extraordinary political action by all educators and citizens alike who understand the necessity of capital investment for human development.

Ohio's Support

Investment in gifted education by the state of Ohio has been sporadic. As of September 1991, about 12% of the elementary and secondary students in public schools in Ohio were identified as gifted and talented, approximately 221,000 students (Ohio Department of Education, 1991a). But because special programs are not mandated in Ohio, about 138,000 of these students are not receiving special instruction.

During the 1990-91 school year, the state funded special instruction for approximately 26,000 of the identified gifted and talented students, about 12% of those eligible for service. The remaining 57,000 students who received special instruction benefitted from their local school districts' ability to provide the instruction without state assistance. The lack of full support for the state's most able students could be a harbinger of Ohio's economic future.

Gifted Education in the Context of Educational Reform

Present criticisms of American public education evolve around two economic issues: (1) the ineffectiveness of the schools in producing competent workers (Congressional Office of Technology Assessment, 1988) and (2) the poor record of schools as the primary institution established to educate our young (Pearlman, 1989). Both sets of criticism are rooted in the American expectation that public education must serve the economic needs of the times. This expectation is not new to American education.

Expectations of Education in Serving Economic Needs

At the close of the 19th Century, the Carnegie Foundation's first president, Henry Smith Pritchett, was troubled by the emerging needs of the growing urban, industrial society. His concern led to the Carnegie Foundation's commitment to serve as the primary agency "to reform American

education so that it could more effectively prepare the scientifically trained experts that Pritchett thought were needed for social, political, and intellectual leadership" (Cremin, 1988, p. 499). Now, in the twilight of the 20th Century, a multitude of reports are directed at education's role in addressing our nation's present economic needs. In such times, the best and the brightest students should be viewed as treasures for the economic well-being of our society.

Social and Education Values

Public education is embedded in a social context that determines *what* is valued, *who* is taught, and *how* they are taught. In this sense, the social values of the overall culture dictate *who* will receive *what* types of education. These values and target groups emerge through our democratic process and eventually are reflected in legislation.

Observers of the present American culture differ in their criticism, not only in terms of what is valued but also in terms of how the values emerge. Bloom (1987) faulted the schools, in particular higher education, as the primary source of the decline of thinking. Postman (1985) cited the American culture's overwhelming interest in entertainment as the driving force behind the superficiality of our thinking. He reminded readers that Aldous Huxley prophesied in *Brave New World* that, in the future, there would be no reason to ban books because there would be few who would want to read.

Others ascribed our decline to the kinds of leaders who are selected. Garry Wills (1987), in explaining the Reagan era, showed how President Ronald Reagan reflected the American dream and, in so doing, reconciled America with itself. He showed how Reagan presented failure along with low expectations as great achievements because the Reagan years emphasized image at the expense of achievement.

Within a cultural and social context, certain achievements are valued more than others. In education, targeted values are translated into aptitude and achievement scores. Targeted values also largely determine the types of school interventions that are considered desirable. Societal values frame both the research questions and the research findings. Kuhn (1970) used scientific language to explain this phenomenon; paradigms are created and discarded as values shift. Research, both in the hard sciences and in the social sciences, is rooted in paradigms that are valued more than are other conceptual models. Gifted education is not different in this respect; the phenomena that are studied and their research findings are influenced by the pressures of the times.

Ohio's Gifted Education Strategic Plan

In March 1990, Ohio's superintendent of public instruction assigned a task force to develop a strategic plan for gifted education in the 21st Century. The task force, a broadly representative group comprised of practitioners and parents, published its results one year later (Ohio Department of Education, 1991a). In the six meetings of the task force held between March 1990 and January 1991, four pertinent questions were addressed:

- Who should receive gifted education?
- What should be the content and expected outcomes of education for gifted students?
- Where should gifted education be delivered?
- How should the effectiveness of gifted education be measured? (Ohio Department of Education, 1991b, p. 4)

The task force also created a mission statement, belief statements, and five goal statements. A set of strategies was developed for achieving each goal. The report is a major achievement for the Ohio Department of Education and could represent a strong foundation for future gifted programs in Ohio. The report presents a process for achieving the mission:

> *The mission of education for gifted students is to prepare each of them to be a contributing member of society by providing appropriate programs and services designed to develop and maximize their unique abilities and enhance personal growth* (Ohio Department of Education, 1991b, p. 5).

The Future: Gifted Education in Ohio

The student population that should be served is diverse, and the potential pool of gifted students in Ohio is large. Approximately 12% of the public school students in the state have been identified as gifted (Ohio Department of Education, 1991a). This figure reflects the presently broad definition of giftedness. It probably does not include others who are gifted and who are not now being served. A broad spectrum of instructional interventions are needed. The diversity of the state's population — rural, suburban, and urban — demands appropriate program options from preschool to adulthood, from home to the workplace.

Typically, schools tend to provide programs for high-achieving gifted students who conform to expected age-grade standards of behavior and who do not question the status quo. But there are many gifted students who are not high achievers, who are uneven in their academic interests and achievements, and whose talents are highly specialized. Frequently, these students are underserved in the standard gifted education programs.

What actions are needed to achieve the mission set forth in Ohio's strategic plan for gifted education? Already in place are many comprehensive programs ranging from part-time placement to full-time placement in magnet schools. Ohio schools are continuing to address additional needs, to refine curriculum, to involve parents, and to consider the entire range of needs for gifted and talented students. What follows are suggestions for some necessary changes needed in Ohio to better serve its gifted students. Some of the changes would require the legal foundation and impetus of state legislation.

Improved public education is the result of enlightened policy changes by legislative action. Some basic changes could do much to improve public education in Ohio and would, as a result, quickly improve the educational opportunities for our gifted and talented children. The selected areas addressed below have not been fully developed but, once complete, would enhance the present education of gifted students. These suggested changes pertain to alterations in the size of existing school districts in Ohio, to the development of comprehensive programs for underserved gifted students, and to increased use of grade and subject matter acceleration.

Reorganization of School Districts

School district reorganization in Ohio, which can be mandated by legislation, can lead to expanded opportunities for gifted students. The creation of metropolitan school districts would spread the tax base across suburban and urban districts. Larger pools of students would be in one school district, thus enabling metropolitan districts to have better and more complete educational programs for all students, including able students. The consolidation, through clustering, of all of the remaining rural school districts in Ohio could eliminate hundreds of the present

district boundaries. Consolidation of rural districts would have the same effect as the creation of metropolitan school districts.

Legislation also could facilitate expanded opportunities for gifted students at the postsecondary level. The sharing of programs and resources of public schools with public postsecondary institutions could result in an increase in the number of Ohio students who are enrolled in postsecondary courses while still in high school and could open up the postsecondary facilities as year-round academies for the most able students. Ohio needs a single public education system that extends through graduate school, one system that removes artificial barriers that prevent the brightest youngsters from progressing at their *own* learning rates. Students should be able to access programs across the entire system as needed.

Underserved Gifted Students

Many gifted students are not now being served in existing programs because few programs are geared to the needs of underachieving children, to culturally different students, and to gifted females. Students from these populations represent an increasing proportion of potentially gifted students. Special programs that address the nature and needs of these special target groups, more and better trained personnel to work with these students, and resources to foster the development of their interests and their strengths are needed to adequately serve all gifted students.

Acceleration

Acceleration, in its various forms, has been associated with gifted education from its inception. It is rooted in the belief that the single most distinguishing characteristic of gifted students is their rapid rate of learning. Four options for acceleration are commonly used in gifted education: (1) early admission to school, (2) compacting a given number of years into a fewer number, (3) subject matter acceleration, and (4) admission to college with advanced standing (Fox, 1979).

In 1967, Ohio required public schools to offer early admission to kindergarten and first grade for those children who met the eligibility requirements. Early admission to school is one of the most efficient ways to accelerate bright children, but it is underused. The reason for its underuse is apparent; most parents are unaware of the provision because school personnel tend not to publicize this option.

Southern, Jones, and Fiscus (1989) surveyed over 500 school practitioners, coordinators of gifted education, school psychologists, building principals, and teachers. Respondents to the survey generally expressed conservative views toward the value of early school admission and acceleration. Despite compelling research evidence, they viewed the process of acceleration as potentially hazardous. Because beliefs are not easily changed (Neisser, 1976), a major public information effort on the part of advocates will probably be needed to inform parents of the benefits of the early admission option. It is unfortunate that school personnel, even those in gifted education, remain committed to the status quo when overwhelming evidence favors acceleration for selected students.

Other Acceleration Options

Advanced standing in college has been achieved through advanced placement tests and through concurrent enrollment of high school students in college courses. Concurrent enrollment requires the physical proximity of colleges and high schools and a coordinated effort with special attention to the social needs of the high school students (Wolf & Geiger, 1986). Figure 2 shows the types of acceleration and studies supporting their use.

Figure 2
Studies and Reviews on Acceleration

Options	Authors
General	Terman & Oden, 1959
Early Admission to School	Reynolds, Birch, & Tuseth, 1962 Braga, 1971
Math Acceleration	Stanley, Keating, & Fox, 1974
Grade Skipping	Solano & George, 1976 Brody & Benbrow, 1987 Fox, 1979 Kulik & Kulik, 1984
Early Admission to College	Keys, 1938 Pressey, 1949 Brody, Lupkowski, & Stanley, 1988
Concurrent Enrollment High School/College	Wolf & Geiger, 1986

Research Findings On Acceleration

Although acceleration has not received widespread acceptance in education, research findings support many benefits for the students. Some authorities attribute the resistance to acceleration by professionals and parents to the unfounded fears that accelerated programs create (Callahan, 1981). A misplaced emphasis on socialization is a powerful influence in discouraging students and their families from opting for accelerated programs.

Schools lose funds, as well as talent, by moving students rapidly through school systems. Thus, there is a financial disincentive to schools for accelerating students through the grades.

Over 40 years ago, Sidney Pressey (1949), a prominent Ohio State University researcher, provided a research base for accelerating gifted students. His series of studies clearly pointed to the societal value for nurturing giftedness, finding able students early and providing them with accelerated educational programs. Pressey's early work served as the foundation for the more current work of Stanley and his associates (1974). It is past time for educators to put this research evidence into practice.

Lehman's (1953) classic studies of age and achievement showed the early peaks by mathematicians (average age 34), chemists (average age 34), and physicists (average age 36). In other studies, Lehman (1946, 1947) showed the importance for scientists and leaders to start their careers at early ages. These studies speak to the need today for more scientists and ways that able students can be encouraged to become scientists.

Policy Initiatives for Nurturing Ability

Figure 3 summarizes some of the needed changes in Ohio's public education system in order to better meet the state's gifted population.

Findings in behavioral genetics and family systems research suggest that *both* individual heredity and family environments are significant factors in nurturing aptitudes and sustaining high achievement. Bloom (1985) studied world class pianists, sculptors, swimmers, tennis players, research mathematicians, and research neurologists. In interviews with these people, he and his colleagues found compelling evidence of the importance of the home environment on the development of talent. The families of these achievers shared a number of characteristics: hardworking parents, an emphasis on always doing one's best, a belief that all family members must be productive in the use of time and in establishing priorities, and a heavy emphasis on self-discipline.

Recent studies, coupled with what we know about the effects of early childhood education on the later achievement of normal and subnormal children, point to the need to emphasize early education for able children and adequate resources for schools to work with families.

Capron and Duyme (1989) found that children adopted by parents with high socioeconomic status have higher IQs than do children adopted by parents with low socioeconomic status. Their research suggests the great influence that environment has on measured intelligence. Plomin (1989)

Figure 3
Examples of Needed Changes in Gifted Education in Ohio

Educational Programs	Increase quality education for all students. Increase the numbers of students who are eligible for grade acceleration. Provide special options for all gifted and talented students. Provide early education for gifted and talented students. Provide state funding for year-long schooling.
Legislation	Create metropolitan school districts. Combine hundreds of rural districts. Place public schools and postsecondary public programs under a single state authority. Provide funds for advanced placement courses and tests. Fund transportation costs for qualified students to access optional educational programs.
Personnel Preparation	Emphasize the research evidence that supports the benefits of grade and subject acceleration for qualified students. Make all forms of acceleration quality indicators of "good schools." Expose all general educators to program needs for gifted and talented students.
Public Awareness	Deemphasize the entertainment culture. Publicize academic and artistic achievements. Require schools to involve parents and students in educational placement decisions throughout the students' school careers. Encourage employers to provide release time for parents to meet and work with teachers. Open schools to parents and students during evenings and weekends.
Testing and Identification	Identify and provide special instruction for all gifted and talented students. Include in this population all underserved gifted students: underachieving, female, culturally different, and handicapped gifted.

demonstrated the importance of looking at family environmental differences. Angoff (1988) noted that many inherited characteristics can be changed and, conversely, many environmentally acquired characteristics are very resistant to change.

McGue (1989) discussed the relevance of Capron and Duyme's findings. He noted that while they provide "unequivocal evidence for the existence of an environmental influence, they do not identify the mechanism of that influence" (p. 507). Thus, more research on familial influence is urgently needed.

Program Options

With larger metropolitan school districts, year-round programs should be available for those students who want to accelerate and enrich their educational experiences. Concurrent enrollment, where students can enroll in both high school and in postsecondary programs, should be increased.

Ohio presently provides two options for high school students who wish to enroll in postsecondary programs. The first option permits eligible students to enroll in college courses for college credit. These students are required to pay all costs. The second option permits eligible students to enroll in college courses at their high schools for both college and high school graduation credit. Under this option, students do not pay for tuition or books (Ohio Department of Education, 1991c.) With a single education authority in the state, barriers that prevent students from participating in these options could be removed.

Advanced placement courses have been available for over 30 years for students who wish to take college level courses in their high schools. But many high schools in Ohio do not offer these courses because of the small number of qualified students and qualified teachers. Another barrier to advanced placement credit is the cost of the tests. State funding for these tests would be an inexpensive investment with great potential gains.

With the inclusion of postsecondary programs into one state system, a wide range of rich instruction becomes possible. The sciences, foreign language, the performing arts, and other forms of enriched instruction would be readily available to all qualified students. While these opportunities now exist, they are limited to those schools that have both the inclination and resources. They tend to occur in the more affluent school districts populated by better informed parents. These are the same parents who are more likely to seek enriched experiences for their children by accessing community resources as well.

Concurrent enrollment and grade acceleration are examples of changes needed in the present Ohio system. Such changes would enhance service for gifted students. There are already many options available for gifted students, but more options are needed to fully address the needs of both the students and the state in preparing for the future.

Conclusion

The opportunity and the challenge exist to shape the future for Ohio's gifted and talented students. Their future is dependent, in large part, on what we are willing and able to do now. In the face of economic challenges never seen before, more resources — time, finances, and personnel — must be invested in nurturing Ohio's gifted and talented students early in their lives. This can be done by restructuring the public education system, removing the barriers to educational options, raising the quality of instruction and programs, and involving parents and students in educational decisions.

The technology and the understanding to make these necessary changes are in place, but the commitment to change education for all gifted and talented children is needed. Today's actions represent the shadow of gifted education for tomorrow.

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Gifted Students and Educational Reform

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Introduction

As the tumultuous 20th Century comes to a close, the status of gifted students in American public schools remains unclear. America's strongest students are caught in a web of societal ambivalence. For 30 years, educational enterprise in the United States has struggled between two desirable educational goals: *excellence* and *equity* (Gardner, 1961; Gallagher, 1991). The dilemma is clear. There are many students, often from cultural minorities, who are not doing at all well in the school system, have not had an equal educational opportunity, and need a variety of additional resources to perform up to the modest standards of current school enterprise (Schorr, 1988).

On the other hand, society is being battered by a series of reports that shows that America's students, particularly gifted students, are not performing as well as the best students from other countries (National Commission on Excellence in Education, 1983). The specter of economic competition has caused these findings to be viewed with considerable societal unease. To compound this problem, many distinguished observers are talking about the needs of a post-industrial society, an information society that demands a highly sophisticated and educated population. There is little question that the number of jobs that demand muscles are decreasing and that the number of jobs that demand brains are increasing.

One of the ironies of this excellence/equity balancing act is that America, as a society, *has* made enormous investments in the education of gifted students. But these investments have occurred mainly at the higher education level. The United States is justly proud to have the finest law schools; medical schools; and graduate programs of sciences, arts, and humanities. The enormous number of students from other countries who take advantage of both undergraduate and graduate education in this country testifies to the universal appreciation for the quality of higher education in the United States. At this level, students become well-prepared for leadership roles and significant positions in society. It is only at the elementary and secondary school levels that the United States blows an uncertain trumpet and risks losing many of its gifted youth.

Values and the Allocation of Educational Resources

One of the key concepts that represents fundamental American values is that of vertical equity, or "the unequal treatment of unequals, in order to make them more equal" (Gallagher, 1991). Such a concept provides comfort and support to those who work with youngsters with handicapping conditions or students with limited opportunities to develop to their full potential.

The arguments for the differentiated education of gifted students, once one gets beyond the general proposition that all students should be educated to their potential, must be different. Gifted students are needed, not just by their families or their friends but by society as a whole, to fill the increasing demand for an educated society in the information age. There is also strong evidence that many students with substantial talent go unrecognized or unchallenged in current school programs (Whitmore, 1980; Rimm, 1991).

The 1960s were years of substantial attention to gifted students, reflecting the interest stemming from the Sputnik scare. From that era, a fairly

consistent model of school adaptations for gifted students has been in place in many states (Seaberg, 1991). These adaptations include changes in learning environment, curriculum content, and mastery of special skills.

Changes in learning environment are designed to bring groups of high-ability students together with a highly qualified teacher to allow for an accelerated or specialized curriculum. Such changes can take the form of cluster grouping, resource room, part-day special class, full-day special class, and even special schools like the network of state residential high schools for science and mathematics that have recently appeared on the scene (Stanley, 1991).

Changes in curriculum content have been made necessary by the rapid mastery of the standard content by these high-ability students. The content can be changed by *acceleration* — bringing more complex matters to the student earlier, such as calculus in the ninth grade or world history in the fifth grade — or by providing students with special topics in greater depth in such fields as history, geography, language arts, and science. Such studies can extend the general curriculum (*enrichment*), can engage in more complex networks of concepts or theories (*sophistication*), or pursue unique curriculum programs such as interdisciplinary studies (*novelty*) (Gallagher, 1985). Figure 1 provides some samples of differentiated curriculum using these four strategies.

Figure 1
Illustrations of Content Modification for Gifted Students

	Math	Science	Language Arts	Social Studies
Acceleration	Algebra in Fifth Grade	Early Chemistry and Physics	Learning Grammatical Structure Early	Early Introduction to World History
Enrichment	Changing Bases in Number Systems	Experimentation and Data Collecting	Short Story and Poetry Writing	Reading Biographies of Persons for Historical Insight
Sophistication	Mastering the Laws of Arithmetic	Learning the Laws of Physics	Mastering the Structural Properties of Plays, Sonnets, etc.	Learning and Applying the Principles of Economics
Novelty	Probability and Statistics	Science and Its Impact on Society	Rewriting Shakespeare's Plays with Happy Endings	Creating Future Societies and Telling How They Are Governed

Adapted from *Teaching the Gifted Child* (3rd Ed.) by J. Gallagher (1985).

Changes in the mastery of special skills are facilitated by encouraging gifted students to model their performances after the skills of productive professionals. The students are taught how to be a historian, how to conduct a scientific experiment, or how to write a short story. In other words, the students learn how to be producers of knowledge rather than simply receivers of information.

The failure to make appropriate adaptations for gifted students in the standard program leads to well-documented student boredom, lack of interest in education and, in some cases, a rejection of higher or advanced education. This rejection not only is a detriment to the student but also is harmful to the society in which the student lives.

Educational Reform and Its Role

A new wave of educational reform is sweeping America in the last decade of the 20th Century. While there have been periodic bursts of public interest in educational change in the past, this current effort appears to be qualitatively different. First, the president of the United States and the 50 governors have put their weight and influence behind this effort, known as America 2000 (U.S. Department of Education, 1991). Second, there appears to be a widespread feeling around the nation that the current system has failed. To the standard cliche, "If it ain't broke, don't fix it," many people now answer, "It's broke." People now seem to have concluded that minor tinkering with an outdated system will not do and, instead, major structural changes are needed.

Figure 2
The National Education Goals

1. By the year 2000, all children in America will start school ready to learn.
2. By the year 2000, the high school graduation rate will increase to at least 90 percent.
3. By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may prepare for responsible citizenship, further learning, and productive employment in our modern economy.
4. By the year 2000, U.S. students will be first in the world in science and mathematics achievement.
5. By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
6. By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

(U.S. Department of Education, 1991, pp. 61-65)

Six national goals set forth in America 2000, listed in Figure 2, indicate that the changes being contemplated are comprehensive. Was education really supposed to counteract the various consequences of poverty, disillusionment, urban blight, and thirst for recreation and diversion that abound in the land? Whether or not education has truly failed, the perception that it has failed is influencing public policy makers in their decisions. Three of these reform movements that strongly influence gifted students are reviewed briefly: accountability, middle schools, and cooperative learning.

Accountability

The public call for educational accountability is a request for educators to show that they have accomplished the goals they have set for themselves, for specific groups of children, and for all children. For example, if gifted children are in a special program, then can evidence be presented that the special program produces measurable differences in knowledge, skills, attitudes, or motivation with these children?

One of the most disputed of current educational issues is that of ability grouping and its effect on students. Does this administrative device work to the benefit of gifted children or other children who have been so grouped? There have been widely circulated reports purporting to show little or no advantage for ability grouping (Oakes, 1985; Slavin, 1988). General statements that ability grouping is of little benefit appear to be true for low-ability or low-performing students but are not true for gifted students! For gifted students, ability grouping appears to have major payoffs. In an extensive metaanalysis of available data, Kulik and Kulik (1991) stated:

> *The evidence is clear that high aptitude and gifted students benefit academically from programs that provide separate instruction for them. Academic benefits are positive but small when the grouping is done as part of a broader program for students of all abilities. Benefits are positive and moderate in size in programs that are specially designed for gifted students. Academic benefits are striking and large in programs of acceleration for gifted students* (Kulik & Kulik, 1991, p. 191).

A similar finding was reached by Rogers (1991) who summarized information for the National Center for Research on Education of the Gifted. In terms of accountability, programs that accelerate gifted students and place them in resource room programs are reported to have positive results (Vaughn, Feldhusen, & Asher, 1991). Callahan and Caldwell (1986) discussed the special problems of evaluating programs for gifted, such as test ceilings and differential content.

Middle School Concept

A major shift appears to be taking place in this country, from the traditional junior high school to the middle school concept (George, 1988). The middle school concept has several definite elements that are to be included in such a program:

- A strong affective component, with teams of students and teachers organized to foster a sense of belonging
- An interdisciplinary focus on content
- A curriculum that emphasizes inquiry exploration and discovery
- A schedule characterized by flexibility in time and size of group

Many of the strong advocates of the middle school, such as George, also believe that heterogeneous grouping is an important element of middle school programs. Interpreted literally, this would mean that honors courses or accelerated course work for high performing students would be

abandoned. There seems to be good reason to believe that some form of ability grouping for some subject areas is possible without abandoning the concept of middle school, and many middle schools do use ability grouping in specific content areas. There would seem to be good reason to believe that the middle school philosophy and a strong program for gifted students can thrive together (Sicola, 1990).

Cooperative Learning

The term *cooperative learning* covers a variety of activities that bring small groups of students together in pursuit of a particular goal (Johnson & Johnson, 1990; Kagan, 1988; Slavin, 1990). In Slavin's version, there are group goals and individual accountability; each student's performance is counted as part of the team result.

As with the middle school concept, some of the proponents of cooperative teaming propose that groups be organized in a heterogeneous manner, where one gifted student may be teamed with children who have a variety of achievement and aptitude levels (Slavin, 1990). This approach was criticized by Robinson (1990) who believes that there is no evidence supporting this approach with gifted students. Robinson feels that when cooperative learning in heterogeneous groups is used for educating gifted students, group goals inevitably have to be "watered down" to include low-ability children; gifted students often must take on responsibility for the entire group, leaving them with no time to seek more sophisticated knowledge, beyond their grade level, in their own areas of interest.

Cooperative learning is not a comprehensive educational philosophy or program but merely one of a number of useful instructional strategies. As pointed out, there is no essential rule that says that cooperative learning is not a valid strategy to use in groups or classes of gifted students. In fact, it might even work better under such circumstances (Gallagher, 1988).

What Awaits in the 21st Century?

Diverse issues remain to be solved prior to entering the 21st Century in a strong position educationally.

Personnel Preparation

Without well-prepared teachers, there is little likelihood of successful programs for gifted students. Teachers need to have strong knowledge of content, understanding of thinking processes, and a variety of instructional strategies appropriate for gifted students. Personnel preparation is one of the areas in the education of the gifted that obviously requires extensive thought and consideration. For some time now, a special education model has been used in programs for certification in gifted education, which was built upon basic elementary or secondary certification being offered in university departments.

The lack of student and faculty subsidies from outside the university for such programs has made this model an uncertain one, followed by only a handful of higher education institutions. A well-designed personnel preparation program that can be offered through the school systems, as well as the universities, must be developed. The content and nature of this program, and how it is to be implemented, should be the subject of sustained attention by state and national professional associations.

Missing Talent

There are many students in our schools whose full talent is not being recognized and stimulated. The Jacob K. Javits Gifted and Talented Students Education Act of 1988, which supports research and demonstration programs for gifted students at the federal level, has stirred interest in how to discover gifted students from culturally diverse groups. It is just as

important to consider if the programs for these students, once discovered, need to be shaped in different ways to take their cultures into account (Kitano, 1991; Frasier, 1991; Maker & Schiever, 1989).

Similarly, there is intense interest in how gifted females can be better served (Reis & Callahan, 1989; Rand & Gibb, 1989). There is concern about large numbers of gifted females not living up to their full potential because of lower societal expectations of what girls can do, particularly in traditional, male-dominated fields such as mathematics and science (Stanley & Benbow, 1986).

Curricular Options

Valid curriculum units and a curriculum bank for teachers are needed. Most teachers of gifted students have been forced to develop their own materials, and the result has been a potpourri of materials — some brilliant, some mediocre. A more systematized way is needed to assure that the differentiated content provided to these students is both valid and linked to the overall program (Gallagher, 1985).

Strategies and Metathinking

One of the recent discoveries from the information processing literature is that gifted students are much more likely to use metathinking, the ability to think about one's own thinking, to be able to apply systematic strategies to unsolved problems. The explicit teaching of models, such as creative problem solving, or the rules for developing plot and character in short stories would seem to have significant payoff for gifted students (Sternberg, 1986; Borkowski & Kurtz, 1987).

The Term *Gifted*

There is some question as to whether the term *gifted* will survive into the 21st Century. It carries excess baggage (Gallagher 1991), implying an inherited wealth of intellect and an effortless achievement of goals, and it apparently elicits a negative reaction to the presumed elitism that the term implies to many people.

What, if anything, will replace the term *gifted?* Regardless of the term used, the youngsters it now describes will still be out there, bored and non-productive, still needing a stronger educational experience than most of them are receiving now. Confusion about the term should not lessen the resolve to provide an appropriate education for these students. It is the right thing to do, and it might even help to restore our national sense of competence and confidence.

Conclusion

If such external threats as Sputnik and communism have been the driving forces behind the support of many programs for gifted students, then the dissolution of the Soviet Union could well mark a relaxation and diminution of interest in gifted education. However, the United States, in this information age, needs an enormous cadre of bright and well-educated youths to carry us, both economically and politically, into the 21st Century in a position of international leadership.

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Conceptions of Intelligence and Giftedness

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Conceptions of Intelligence

Among psychologists, Edwin Boring is best remembered for two accomplishments. One of these accomplishments is a detailed history of the persons and ideas that shaped the field of psychology (Boring, 1950). The other is a simple, thought-provoking statement: "Intelligence as a measurable capacity must at the start be defined as the capacity to do well in an intelligence test. Intelligence is what the tests test" (Boring, 1923, p. 35).

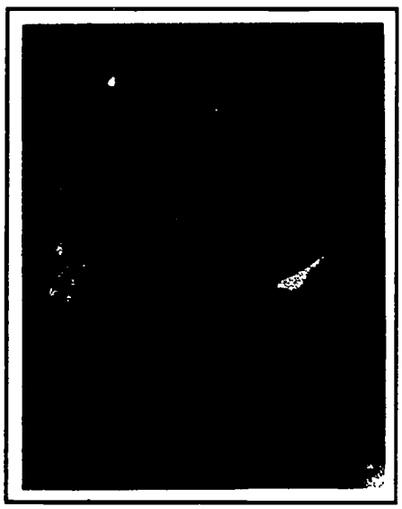
The first accomplishment is a useful review, but the latter is disturbingly prophetic. Despite the addition of many new theories, technological advances, and heightened concern about the untapped gifted among our various atypical populations, we are still bound to the concept that intelligence emanates from a child's functioning on a selected set of items, under a set condition, administered in a very short amount of time. Such information has been useful in the establishment of basic programs, but it is time to move on and consider a broader concept of both intelligence and giftedness.

Boring (1950) traced the measurement of human capacity from its inception in the mid-1800s to the middle of the 20th Century. Recently, Robert Sternberg (1990), one of the most prolific and influential of the current theorists in this field, reviewed the history of "intelligence" and presented a framework for viewing past and present conceptions of this illusive concept. While it is impossible to do justice to the work of either man in a limited space, a brief review may set the stage for consideration of definitions of both *intelligence* and *giftedness*. In the final analysis, highly personal variations may exist for both concepts, and these may be subject to change within the reality of various political contexts.

Concern with the nature of intelligence and intelligence testing comes from various sources. Galton, following the work of his cousin, Darwin, produced *Hereditary Genius* in 1869, starting the movement that advocated the primacy of "nature" in the development of the highly intelligent. At the same time, the German, William Wundt, was developing a series of psychophysiological tests concerned primarily with the speed of reaction time during various sensory-motor tasks. While Cattell was naming these tasks "mental tests" and promoting them in the United States, the Frenchmen, Binet and Simon, were conceptualizing a set of tasks aimed at identifying the mentally retarded. The initial Binet-Simon product, published in 1905, extended the required tasks to include "memory, imagery, imagination, attention, comprehension, suggestibility, aesthetic appreciation, moral sentiments, strength of will and motor skill" (Boring, 1950, p. 572).

In the United States, Lewis Terman translated and adapted the Binet-Simon test and popularized the concepts of mental age and intelligence quotient (a ratio comparison of chronological and mental age). The Stanford-Binet became the norm for individual assessment, later to be joined by the scales of David Wechsler who abandoned the concept of mental age but added verbal and performance sub-scores to the single overall intelligence quotient (IQ). On another front, advances in statistical analysis led to interest in factorial analysis and the "normal curve," to name just two continuing influences on the identification and labelling of exceptional groups (Boring, 1950).

Other significant movements provided their own influence in shaping current understanding and use of the terms *intelligence* and *giftedness*. During World War I, the first wide-scaled use of a group test, the Army Alpha, was devised to place inductees in appropriate positions in the military. The inability of many illiterate soldiers to respond to this verbal, written test led to the development of the nonverbal test, the Army Beta, and fueled the continuing nature-nurture controversy (Anastasi, 1982). The use of group tests continues as does some concern about their appropriateness. While individual tests are used exclusively in the identification of disabled children, group intelligence tests, such as the Cognitive Abilities Test (Thorndike & Hagen, 1986), have been more typically used to identify gifted children. This practice can be supported for gifted children who are good test takers and good readers but may seriously under-identify the atypical gifted because of their lack of test sophistication, inability to attend well in a large-group administration, and/or the presence of reading difficulty.



According to Sternberg (1990), the cited historic influences have been joined by others, most notably the information-processing model. Sternberg developed a framework of seven metaphors for the mind and its function, intelligence, which summarize the viewpoints of those who have contributed to this process over the last century and a half:

1. The *geographic* metaphor perceives the mind as a map and encompasses two-factor and multiple-factor theories, such as those of Spearman, Thurstone, and Guilford.
2. The *computational* metaphor seeks the information-processing routines that underlie intelligent thought and are best represented by Sternberg himself.
3. The *biological* metaphor searches for anatomical/physiological correlates to intelligence and delves into such issues as hemispheric localization, as theorized by Luria and Das.
4. The *epistemological* metaphor is concerned with the structures of the mind through which knowledge and mental processes are organized, as postulated by Piaget and his followers.
5. The *anthropological* metaphor proponents perceive intelligence as a cultural invention, as held by Berry, Cole, and Charlesworth.
6. The *sociological* metaphor proposes mediated learning experiences and the internalization of social processes as the basis for intelligence, as theorized by Vygotsky and Feuerstein.
7. The *systems* metaphor perceives the mind as a system that crosscuts and incorporates many of the other metaphors, as did Gardner in his concept of multiple intelligences and Sternberg in his triarchic theory of intelligence.

Three of these theorists and their colleagues are very active in areas of research that are likely to expand conceptions of giftedness and intelligence. These three are Howard Gardner, Robert Sternberg, and J.P. Das (the latter working with Jack Naglieri).

Howard Gardner (1983), while less defined than the other two theorists, served to expand our consciousness beyond the academically oriented gifts that he labelled linguistic and logical-mathematical intelligences. To these he added the intelligences (or talents) of spatial ability (such as those used by the pilot, the architect, and the chess player); musical intelligence,

which allows people to sing, play, and appreciate music; bodily-kinesthetic intelligence, which involves using the various body components, in such diverse activities as athletics or surgery; and interpersonal and intrapersonal intelligences, which involve knowing others and ourselves and can form the basis for both human service careers and for personal understanding and satisfaction. For gifted educators, acknowledgement of the additional five intelligences raises questions of both identification and curricular content.

Sternberg's triarchic theory of intelligence consists of three elements: metacompone 's, performance components, and knowledge acquisition components. ~~~erse order, knowledge acquisition pertains not only to the learning (. . : information but also to the selection of the appropriate informatio.. ior the given task. Performance components include those many processes that execute the instructions of the metacomponents and that, depending on the task, may entail higher-order thinking skills or rather low-level performance. Finally, metacomponents are those higher-order processes that entail planning, monitoring, and evaluating.

In adapting this theory of giftedness, Sternberg added three sub-theories and defined exceptional intelligence as "purposive adaptation to, shaping of, and selection of real-world environments to one's life" (Sternberg, 1986, p. 235). The first sub-theory specifies the internal mental mechanisms that lead to intelligent behavior; the second specifies the role of experience, including reaction to novel situations and automatization of repetitive situations (ability to generalize); and the last involves adaptation to the external world, which may vary across cultures and even subcultures (Sternberg, 1986). The latter point may imply that integration of economically or ethnically different children into gifted programs must include an understanding and accommodation of these differences if such children are to succeed. Part of the attraction of Ster berg's theory is his attempt to translate it into practical application. For that purpose, Sternberg (in press) has devised a *Triarchic Abilities Test* and has co-edited a book on teaching thinking skills (Baron & Sternberg, 1987).

The third line of research that merits attention is based on the Russian psychologist, A. F. Luria, and is being carried on by J.P. Das, Jack Naglieri, and their associates. The Luria model is meant more as a neuropsychological view of brain function rather than a theory of intelligence, but given the current interest in serving the disabled gifted population, both the theory and applications of the theory deserve consideration. Das (Das, Kirby, & Jarman, 1979) believed that a multifactorial view of intelligence could be implied from the model in that some tasks might entail specific systems, but high intelligence would result from the smooth integration of the three systems.

Luria described the brain as three systems that perform various levels of functioning and cut across several anatomical features:

- The *arousal system* interconnects cells in the subcortical brain, the reticul.r activating system, and the frontal cortex. Abnormalities in this system can lead to hyperactivity, hypoactivity, or sleep disorders.
- The *sensory reception and integration system* is contained in the cerebral cortex and consists of the reception and analysis of input from the five senses and the integration of this information across sense and across hemispheres of the brain.

- The third system, *programming, regulation, and verification of activity,* provides motoric response to the input and controls the decision-making functions of the brain. It resides primarily in the prefrontal and frontal lobes of the brain and is the last to mature.

Building on the Luria model, Das, Kirby, and Jarman (1979) proposed a model of information integration based upon simultaneous and successive processes. Simultaneous processes involve the synthesis of separate elements into groups (such as seeing a face instead of a collection of separate anatomical parts), and successive processes involve the processing of material in sequential order (as is required in spelling or mathematics). Breakdown in one or the other of these processes may result in a learning disability.

From this model, Das and Naglieri (Das & Naglieri, 1987; Naglieri & Das, 1988, 1990; Naglieri, Das, Stevens, & Ledbetter, 1991) developed a series of tasks designed to measure cognitive processes across the three functional systems. This so-called PASS model (planning, attention, simultaneous, and successive) replaces the concept of IQ with the concept of cognitive processing; replaces the model of intelligence based on content, modality, or method of presentation with one that describes the cognitive processes required to solve the tasks; and uses psychometrically sound tasks that fit the model and are measures of the cognitive processes (Naglieri, Das, Stevens, & Ledbetter, 1991). This experimental assessment system is now being readied for publication and may afford a whole new way of looking at intellectual functioning.

High intelligence wears many faces. It can be viewed narrowly as good test-taking skills or, more appropriately, as a combined result of genetics, cultural heritage, and environmental opportunity, which leads to a superior ability to process information. Linking a given theory to a given gifted program is a mighty leap, but ignorance of the knowledge base that now exists in this field will most certainly diminish the effectiveness of existing programs and narrow the scope of their service. New assessment procedures, new emphasis on the skills of information processing (or thinking), and a better understanding of the atypically gifted can be developed from these models.

Conceptions of Giftedness

Sternberg addressed both intelligence and giftedness. Most authors discuss either one or the other. Those who conceptualize giftedness are more likely to have a direct interest in applications to the education of the gifted child. Foremost among those cited must be Joseph Renzulli and his three-ring conception of giftedness. The three rings include the following:

- *Above average general or specific ability* (or talent)
- *Task commitment,* or the ability to bring energy, "perseverance, endurance, hard work, dedicated practice, self-confidence, and a belief in one's ability to carry out important work" (Renzulli, 1986, p. 69)
- *Creativity,* or originality, freshness of thinking, and the ability to attack novel situations by setting aside conventions and standard procedures

Given the limitations of current assessment instruments to detect these characteristics, Renzulli advocated serving a larger group than the traditional 3% to 5% within a "Revolving Door Model." He further distinguished between "school-house" (or test taking, lesson learning) giftedness and creative-productive giftedness that may more likely be manifested in

those areas of study that have personal meaning to the student. Renzulli supported the relevance of each and the need to support the development of both.

Horowitz and O'Brien (1985) developed a developmental model of giftedness that explores the interaction of environmental and organismic variables (that old nature-nurture issue). It was their contention that the former falls on a facilitative/nonfacilitative continuum and that the latter falls on a similar vulnerable/invulnerable continuum. Organisms (or persons) that are least vulnerable and are given the most facilitative environment become our most gifted. They cited the role of both the home and the school in providing these facilitative environments.

A good example of a facilitative environment is that created by Barbara Clark (1986) who, believing that creativity is the highest form of giftedness, developed an integrative education model that combines thinking with feeling, the senses, and intuition. They advocated such activities as stress reduction and movement education as well as challenging cognitive activity, where student choice and empowerment are made possible within a responsive environment. While more of a curricular model than a conception of giftedness, integrative education is designed to develop the full potential of each child.

Finally, a delineation of the six subtypes of gifted provided by Betts and Neihart (1988) has helped to shape thinking about those who are gifted and about what needs to be done to identify and serve them appropriately:

1. The *successful gifted* who conform and achieve, but who may be too perfectionistic and lack in risk-taking behavior
2. The *challenging gifted* who are creative, bored, and rebellious and may need assistance in becoming self-controlled and committed to the group
3. The *underground gifted* whose shyness and poor self-concept may keep them from surfacing as part of the gifted population
4. The *gifted dropouts* who may be angry, explosive, and burned out in the school situation
5. The *double-labelled* who are both disabled and gifted, but who may be overlooked except for their handicap
6. The *autonomous gifted* who are enthusiastic achievers, have a good sense of self, are intrinsically motivated, and psychologically healthy

The joy of gifted education is in producing large numbers of autonomous gifted. The challenge is in producing them by effecting change in the other five categories.

Political Implications and Future Directions

Gifted education in Ohio and throughout this country is now at a crossroads. Ohio has developed standards based on the Marland (1972) categories of general intellectual ability, specific academic ability, creative or productive thinking, and talent in the visual or performing arts, and has developed programs of various quality and quantity to serve these categories. Educators of the gifted have access to a considerable knowledge base about gifted children, have written curricula, and have acquired techniques to counsel children and their parents about the joys and pitfalls of being gifted. They have watched the reactions of children who have been introduced to the satisfaction of engaging in higher-level thinking, completing personally selected long-term projects, and mastering creative problem solving.

On the negative side, while educators of the gifted have supported the concept of enlarging the gifted "pool" to include the disabled, the culturally and ethnically different, and the economically disadvantaged, they have not adjusted identification procedures, overreliance on group test scores, and notions about intelligence and giftedness to allow this to happen. They have looked at the continuum of services model borrowed from special education and adapted for the gifted by the Pyramid Project (Cox, Daniel, & Boston, 1985) but have applied it with half-hearted enthusiasm and supported it with little or no funding. They have talked of the need to become a model for educational reform, but have continued to isolate themselves from their general education colleagues.

Phase one of education of the gifted in Ohio is now complete. Educators entered this process with limited resources and a limited knowledge base but with a real commitment to and enthusiasm for bettering the education of Ohio's most able children. They need to look at their successes and adjust their standards, programs, and thinking so that they can move on to a broader-based, more successful second phase.

The enthusiasm of those involved in gifted education and the needs of the children remain constant. Signs of change are everywhere. If educators build on what they have learned from their experience and meld it with the ideas of those who have built a research base, they can more nearly address the needs of those many students who will both demand and deserve an exceptional education in the 21st Century.

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Identification of Underserved Populations: Focus on Preschool and Primary Children

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Introduction

Among the critical issues to emerge from an analysis of underserved populations in gifted child education are four key topics: identification practices, programmatic options, integrated curriculum development, and evaluation. This chapter explores the identification of gifted children from the current perspective, examines the impact of current identification practices on underserved populations, outlines some promising practices for assessment, and summarizes implications for educational development when serving underrepresented populations.

Current Identification Practices

Current practices for identification of gifted children generally use some combination of test data, either group or individual, and some form of documented superior performance, usually teacher information or grades. Diverse areas of giftedness (cognitive, academic, creative, and artistic) are examined through different combinations of test data and school performance. Educators of gifted children try to bring a quality of order to an imprecise process. The emphasis on test data provides a "defensible" position from which to include or exclude children in gifted programs. Standardized test scores are used to explain to parents and teachers exactly why a child is or is not identified.

It seems to be a prevailing belief in our society that if something is important, such as achievement, ability, or success, it can be objectively measured and quantitatively defined. As a result, education is becoming more and more measurement driven. The use of "cut-off scores" or "minimum IQ" or "achievement test scores" for gifted identification suggest that there is a significant difference between a child who achieves a score at the "cut-off" level and one who achieves a score a few points lower.

Although test data can provide information about a child, they cannot tell everything. For example, group tests cannot tap a gifted child's vast accumulated knowledge, problem-solving skills, speed of learning, manipulation of symbol systems, creativity, curiosity, and drive to know. Even individual measures cannot tell the whole story.

School behavior, specifically test scores and grades, is considered reliable evidence of giftedness in many districts. However, one must question further. Do the results of tests provide evidence of *characteristics* of giftedness, or are they perhaps evidence of very narrow and specific *products* of giftedness? The difference between characteristics and products of giftedness is critical as test data and school performance are used to identify gifted children. The relationship of characteristics to identification strategies is critical in attempting to identify those gifted children in need of educational intervention.

Impact of Current Identification Practices on Underserved Populaticns

Traditional practices used to identify giftedness may not be adequate. As educators have grown more confident in the identification of gifted children through traditional means, they have begun to take a look at *which* children have been identified with those systems. Substantial research indicates that present identification practices result in certain populations of children being overlooked (Richert, Alvino, & McDonnel, 1982).

Certain groups of children, referred to as "underserved" or "underrepresented," have somehow been missed in the identification process. Preschool and primary age children, underachieving children, handicapped children, poor children, children from diverse cultures, children from minority groups, and adolescent females have not fared well under traditional identification systems.

These children, estimated by some to comprise up to 60% of the school age population, may exhibit characteristics of giftedness. However, their gifted behavior is not measured accurately by tests and/or is not recognized as gifted behavior in the school environment (Richert, Alvino, & McDonnel, 1982). Trust in the accuracy of a test score to describe something as complex as a child prohibits educators from looking at these children more closely. They may not look for giftedness in children whose performance on a test is less than the expectation of "gifted" performance. If educators do not think of particular children as gifted, they limit their ability to look at these children as such. The lens through which children are seen becomes narrow and cloudy.

Current identification systems have found exactly what they are predicted to find — high-achieving or high-performing students. However, reliance on test data as the primary factor for gifted identification is inappropriate, especially in light of current knowledge about child development and the attributes of gifted children. Academic behavior is a piece of information, but it is far from being the only criterion that should be used to determine exceptional potential or educational need.

Large numbers of gifted children should not be overlooked because of inaccurate or unavailable test data or poor school performance. The field of gifted child education must move beyond identification to assessment and necessary edu :ational interventions. Assessment would provide data that would help to identify all gifted children, regardless of age, race, disability, gender, or income.

Promising Practices for Assessment

Substantial research supports the belief that the early years (birth to age 8) are critical to the child's development of self-esteem and self-image, social competence, emotional adjustment, personal values and habits, specific cognitive abilities, and achievement motivation. However, gifted children have traditionally not been identified during these early years. Identification of special needs and appropriate provisions in these early years are accepted practices in education when dealing with areas of exceptionality and should be extended to gifted children as well.

Similarly, intervention to prevent underachievement in gifted students is most effective in the first three years of school when perceptions, self-concepts, and behavior patterns are being formed. The time and effort required to reverse patterns of underachievement established in kindergarten through grade three increase substantially with every year that assessment and programming are delayed (Whitmore, 1986, 1988). There is no doubt that early assessment and early intervention are necessary elements in the development of young gifted children.

Among the most supportive efforts to appropriately assess young children is the position statement adopted by the National Association for the Education of Young Children (NAEYC, 1988). The NAEYC articulated a clear and definitive statement with regard to developmentally appropriate practices for young children. Noting the necessity for assessment of individual development and learning in the process of planning and implementing programs, the position statement contains several important assertions regarding the use of standardized tests for the early identification of gifted and talented students.

First, standardized tests for young children are often selected because of availability rather than reliability. The basic requirement that standardized tests be reliable and valid is often not met when assessing young children. Indeed, the NAEYC emphasized that standardized tests should be used "only for the purposes for which data exist to support validity ... [and only] to benefit children in some way" (Bredekamp & Shepard, 1989, p. 15). Although most educators of gifted children would agree with this position philosophically, common practices used in the schools for testing young children are not consistent with this position.

Second, the NAEYC position statement gives further assurance for the development of educational programs based on inter- and intra-individual differences of young children. This position advocated the following: integrated development and learning experiences; engagement in active rather than passive learning experiences; relevant, engaging, and meaningful content; teacher-facilitated collaborative inquiry learning; and experiences that emphasize physical, social-emotional, and moral development. "A principle of [developmentally appropriate] practice is that the younger the children and the more diverse their backgrounds, the wider variety of teaching methods and materials required" (Bredekamp, Ed., 1987, p. 66).

Clearly, the strong position of the NAEYC can give support to persons in gifted child education working with diverse populations of young children. This philosophy can also give direction to altering current models of assessment and programs for underserved populations.

Models of Assessment

Overreliance on standardized tests to assess developing abilities has contributed substantively to the lack of student identification at the preschool and primary levels. If standardized tests are not the most appropriate means of evaluating potential or performance in early childhood, then systematic observation and recording appear to be. These methods can be used to answer specific questions, develop a more accurate picture of the child, gain a better understanding of behavior, and evaluate efforts to assess behavior (Irwin & Bushnell, 1980.)

In practice, this means that the teacher should "know the child well enough to evaluate her abilities and achievements. Know the child well enough to place him on a continuum of learning and education that accepts his varying rates and uses mastery as the criterion of forward progress" (Greer, 1990, p. 289). To know the child well, the teacher will have to be knowledgeable of the attributes of young children and young gifted children, and will need to be a skilled observer of the child's behavior as well as an experienced practitioner who engages children in meaningful learning.

In an effort to address the concerns inherent in the assessment of giftedness in young children, several researchers have examined the use of portfolios (Hiatt, 1989; Shaklee, in press). As opposed to achievement test methodology, which imposes a unidimensional view on the interaction of instruction and assessment (i.e., a "one-shot" opportunity for performance),

portfolio assessment occurs at the intersection of instruction and assessment in a continuous and sequential manner (Paulson & Paulson, 1990). In addition to being more representative of a child's ability than a one-time evaluation, portfolio assessment helps circumvent the bias that may be inherent in particular tests.

Portfolios are designed to aggregate a "picture" of the child's performance and potential. Furthermore, portfolio assessment provides a framework for decision making with regard to the curriculum strategies and interventions designed for a child or groups of children exhibiting similar skills and potentials. Finally, the portfolio can provide information useful for program evaluation. The program evaluator can report the degree to which there is congruence between the student portfolios and the program rationale, goals, curriculum, and standards (Paulson & Paulson, 1990).

Systematic use of portfolio assessment for the identification of exceptional potential is being examined by Kent State University's Early Assessment for Exceptional Potential project (Shaklee, Whitmore, Barton, Barbour, Ambrose, & Viechnicki, 1989). This model is based on using developmentally appropriate and ecologically valid observations of children in the classroom. It combines the use of observation strategies with multiple data sources in an ongoing assessment structure.

Teachers are prepared through a series of staff development meetings to collect six types of evidence from four audiences (parent/community members, teachers, students, and peers) over a six-week time frame. The evidence includes (1) anecdotal records (one per child per week); (2) observations of students during six sample lessons that are selected to elicit evidence of exceptional potential; (3) a combined peer and self nomination; (4) a home-community survey; and (5) examples of products produced by the child, which can be selected by the child, the teacher, and/or the parent.

The portfolio is collected for all children in the primary classroom. Teachers assess the evidence of exceptional potential in four areas: exceptional learner of knowledge, exceptional user of knowledge, exceptional generator of knowledge, and exceptional motivation for learning. Based on individual/group profiles, primary teachers make adaptations and modifications in the curriculum and environment to support the development of student potential.

Key elements contributing to the successful use of the portfolio for the identification of exceptional potential in young children include (1) development of teacher ownership in the process; (2) systematic staff development for primary classroom teachers; (3) congruence between the primary identifiers of exceptional potential, data collection procedures, and curriculum modifications; and (4) continuous formative evaluation and summation of the portfolio process from the student and teacher perspectives.

Summary

It appears that gifted child educators are paying closer attention to the needs of underserved populations. Systematic research is being conducted to address the issues of assessment, programmatic alternatives, curriculum integration, and evaluation. However, the research is only meaningful if it is used to modify practice at the local, regional, and state levels.

The issue of appropriate identification of performance and potential of gifted children must be addressed. When current identification practices do not appropriately identify and, therefore, serve historically underrepresented

populations, these practices must be redefined (Frasier, 1991). Conceptions of giftedness must be expanded, and identification procedures must be broadened to include the assessment of both performance and potential. Portfolio assessment provides an alternative strategy for the identification of exceptional potential in young children and provides greater assurance that gifted children in underserved groups will be identified.

In addition, as assessment procedures are redefined, programmatic options must be addressed. A continuum of options should be provided to students based on identified student strengths. These services, including direct and indirect services, should encompass the widest possible appropriate modifications of curriculum and environment to develop the child's talent.

A related consideration to both appropriate assessment and developmentally appropriate programs for young children and other underrepresented populations is state and local funding. Funding should be available not for a narrowly prescribed set of students but for the broadest possible range of opportunities and services provided to students who exhibit both the performance aspects of giftedness and the potential to develop performance attributed to giftedness.

This is an exciting time in the field of gifted child education. Educators have an opportunity to examine and change the field in order to better serve children; they have an opportunity to make a difference. It is up to each educator to become an advocate for appropriate assessment and developmentally appropriate programs. It is up to all educators to "know our children well enough" (Greer, 1990, p. 289).

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Ethnic/Minority Children: Reflections and Directions

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Introduction

Activity in the identification and education of ethnic/minority gifted children, with a special emphasis on those who are economically disadvantaged, has proceeded at an unprecedented rate since the early 1990s. Much of this activity may be the result of the Jacob K. Javits Gifted and Talented Students Education Act of 1988. The hope spawned by this activity for positively changing the amount of gifted program services and the way these services are provided for ethnic/minority children is indeed promising.

The inequities of participation by ethnic/minority children in gifted programs has been and continues to be a central issue of concern. A number of writers have concluded that a traditional identification paradigm, which relies on teacher nominations and meeting a required performance level at a specific cut-off point on tests of intelligence and achievement, has been a formidable barrier to the participation of more ethnic/minority children in programs for the gifted (Frasier, 1991a). What have past research findings and practices told educators about providing gifted services for ethnic/minority students? What trends and issues are having current impact? Where do educators go from here? What are some important principles to guide future endeavors?

The first section of this chapter provides a brief historical perspective regarding past trends and issues concerned with the identification and education of gifted ethnic/minority students. Theories of cultural deficits, cultural differences, cultural diversity, and cultural specificity, as well as their impact on the identification and education of gifted ethnic/minority students, will be presented.

The current status of research and practices concerned with gifted ethnic/minority students will be the focus of the second section. Initiatives that are providing a transition to new ways of thinking about giftedness, with implications for ethnic/minority students, will be included in the discussion. Exemplary initiatives will include the recommendation to use multiple criteria, the implications of research on multiple intelligence, and the components of intelligence; recommendations to focus on behaviors as opposed to relying on psychometric techniques to determine gifted potential; and the thrust created by recommending multicultural, cross-cultural, and cultural-context perspectives as providing better approaches to viewing giftedness in ethnic/minority groups.

The final section will present implications for the future, focusing on the paradigmatic shift that is occurring in identification and programming for the gifted. The significance of this shift for ethnic/minority students will be discussed.

Historical Perspective

Definitional Issues

When discussing ethnic/minority children and their participation in gifted and talented programs, terms have proliferated: *culturally deprived, educationally deprived, underprivileged, low socioeconomic children, inner-city dwellers, culturally impoverished, culturally handicapped, educationally disadvantaged, children of the poor, culturally disadvantaged,*

culturally different, and *culturally diverse.* With the exception of the last two terms, a deficit or pathological condition was implied. The most extreme deficiency view implied that biological or genetic inferiority grew out of the controversial theory of racial differences espoused by such researchers as Arthur Jensen. More moderate views have focused on environmental deficiencies in the home and the community.

Noting that deficiency theories provided very limited views of gifted potential in ethnic/minority groups, such terms as *diverse* and *different* began to emerge in the early 1970s. Much of E. Paul Torrance's earlier writings forecasted the need to focus on defining culturally different gifted children in terms of strengths, especially creative strengths. This theme of strength was also evident in the work of Catherine Bruch who advocated differential scoring of tests for ethnic/minority students. That is, she advocated only scoring those test items that reflected the strengths of different cultural groups; those items that did not reflect a strength were not considered in the scoring.

Culturally different, a term that became popular in the 1970s, referred to those children who were economically disadvantaged as well as to members of a culture other than the dominant culture. This term was soon replaced by *culturally diverse* in an attempt to focus attention on the positive aspect of diversity and to get away from the negative tone of *different* (Frasier, 1977).

Baldwin (1985) considered cultural diversity as one of three interrelated variables that describe the unique needs of ethnic/minority children. She saw cultural diversity as a condition of racial, ethnic, language, or physical difference from a dominant culture. The other two variables were socioeconomic deprivation, a condition of legal or de facto denial of social interaction combined with substandard housing and jobs, and geographic isolation, a condition of being geographically isolated from mainstream cultures.

More recently, however, the culture-specific approach has focused attention on describing the behaviors of gifted ethnic/minority children within the context of their culture. An outcome of the culture-specific approach was an increase in the number of gifted programs developed for specific cultural and economic groups.

A response of the 1980s has been to shift the emphasis from defining specific cultural groups to including a wider variety of subgroups of gifted children. In a special issue of *Journal for the Education of the Gifted,* Gallagher (1987) referred to the subgroup of gifted children who are poorly recognized and insufficiently supported in gifted programs as the "gifted underserved." In this same issue, Whitmore (1987) defined underserved populations to include all children who suffer neglect because of insufficient conditions and opportunities to nurture, stimulate, and guide the full potential of their individual abilities. In addition to ethnic/minorities, this group also included preschool and learning disabled children, gifted females, and underachievers.

Identification Recommendations

Several identification procedures have developed out of the theoretical approaches to giftedness in ethnic/minority groups. Based on the culturally different and culturally diverse approaches, these procedures tended to emphasize multiple expressions of intelligence in the child's cultural context.

The Baldwin Matrix (Baldwin & Wooster, 1977) was an example of a procedure designed to facilitate the use of a variety of objective and

subjective techniques to assess exceptional abilities. Results from several studies have demonstrated its usefulness in increasing the number of ethnic/minority students served in programs for the gifted. The System of Multicultural Pluralistic Assessment (SOMPA) was another procedure (Mercer & Lewis, 1978), the goal of which was to evaluate intelligence by comparing information on a child with that of children from the same cultural and economic background.

Summary

Although tremendous progress has been made in the search for workable solutions to the challenge of adequately identifying and serving ethnic/minority students in gifted programs, the problems are still not fully solved. Several recent studies have documented the large underrepresentation of ethnic/minority students in gifted programs. The ratio of non-ethnic/minority students to ethnic/minority students in gifted programs is approximately 5:1, a ratio that has persisted since the early 1970s (Frasier, 1990a).

One explanation may be how society has viewed cultural differences. A perspective that has come from anthropologists and sociologists is that the theory of cultural differences comes from social learning theory and suggests that behaviors are context-sensitive. Because particular behaviors tend to be produced in response to significant features of the contexts in which they have been learned or practiced in the past, these behaviors do not represent deficits. Rather, they are functional behaviors when displayed in the appropriate context. Contributing to the complexities surrounding gifted ethnic/minority students, however, is the fact that these context-sensitive skills, strengths, and values may still be seen as irrelevant or maladaptive in schools or institutions based in principles of mainstream Anglo-American culture.

The Current State of Affairs

Beginning in the 1980s, the field of gifted education has been involved in major changes. Some of these changes reflect concepts that have long been advocated to address the concerns of gifted ethnic/minority children. Others provide a foundation for developing new perspectives.

Definition and Identification Issues

The trend toward focusing on the diversity within gifted populations is beginning to grow. A special issue of *Gifted Child Quarterly* in 1982 provided a perspective on this trend. The intent of this issue was to reverse or eradicate some of the myths in gifted education. In this issue, Treffinger (1982a, 1982b) noted that the narrow definition and identification procedures used in gifted education have spawned a notion that the gifted are a single, homogeneous group of students. He urged the recognition of the many kinds of characteristics, strengths, talents, aspirations, and needs represented in this group and recommended that the focus of identification be shifted to procedures that facilitate the search for unique characteristics or indicators of behaviors. This shift necessitates using both qualitative and quantitative data to identify gifted students; using identification data to make placement and instructional decisions; and considering the identification process as a means of examining the most appropriate paradigm, not just one of selecting the best tests or instruments.

These recommendations reflect the earlier concepts of cultural differences and cultural diversities, but not that of cultural deficits. In a volume edited by Maker & Schiever (1989), similar recommendations were made by the contributing authors :

- Use multiple assessment procedures, including objective and subjective data from a variety of sources.

- Include culturally and linguistically appropriate instruments in the referral and testing process.
- Use a case study approach in which a variety of assessment data is interpreted in the context of a student's individual characteristics and decisions are made be a team of qualified individuals.

Focus on Gifted Behaviors

Several writers have urged a shift from psychometric techniques as the sole means of determining gifted potential to a focus on gifted behaviors as a more reliable and comprehensive way to view gifted potential. A strong proponent of this shift to gifted behaviors has been Joseph Renzulli who has forcibly argued that the search for exceptional potential should shift from one of unequivocally identifying the gifted to one of concern for developing gifted behaviors. Gifted behaviors can be developed; a focus on identifying those who are *the* gifted and those who are not does not provide the needed base for program development.

Advocates for gifted ethnic/minority students have long recommended the need to focus on gifted behaviors, especially as they are differentially manifested in various groups. For example, Baldwin (1985) noted that since minorities may exhibit many behaviors that represent their adaptive responses to environmental circumstances, dimensions of these behaviors should be considered in terms of their giftedness. She developed a list of relevant behaviors and provided a description of ways in which these behaviors might be observed in the classroom.

Gay's Comparative Characteristics Checklist (1978) translated a list of common concepts of giftedness into a list of behaviors that describe how these characteristics might be manifested in gifted black children. To sensitize nominators to the differential appearance of gifted behaviors in children, Frasier (1989) compiled a list of behaviors associated with gifted children in general. These behaviors were matched with behaviors associated with gifted disadvantaged children. Frasier's compilation of common behaviors reflected the list of mental talents held in common by advantaged and disadvantaged students, developed by Gallagher and Kinney (1974).

Other examples include Bernal (1974), who developed a specific checklist of gifted behaviors demonstrated by Mexican-American children, and Tonemah (1987), who created a checklist delineating creative behaviors of Native-American children. The Torrance Checklist of Creative Positives (Torrance, 1977) is an example of a checklist that emphasized the behavioral strengths of disadvantaged children. Torrance was primarily concerned with identifying the talents of culturally different students from low income families.

To further understand this notion of gifted behaviors and to understand the implications for identifying gifted ethnic/minority students, researchers in the National Research Center on the Gifted project at The University of Georgia have focused on the concept of a giftedness construct:

> *Giftedness is a concept or psychological construct.... We do not measure giftedness directly.... Instead we infer giftedness by observing certain characteristics or behaviors of individuals* (Hagen, 1980, p. 1).

Further, they are examining a concept based on investigations by Hoge (1988) that the choice of instruments and procedures to evaluate giftedness should reflect the range of traits, aptitudes, and behaviors (TABs) that define giftedness or gifted potential in a particular situation. Following this

lead, 10 general categories of TABs were identified to represent the giftedness construct and to guide the selection of assessment measures for identification procedures: motivation, interests, communication skills, problem-solving ability, memory, inquiry, insight, reasoning, imagination/creativity, and humor (Frasier, 1991b). Investigations are underway to explore the validity of these TABs in helping teachers to observe gifted potential and in guiding the selection of test and nontest measures to evaluate exceptional performance.

The Multiple Intelligence and Componential Concepts of Intelligence

Much has changed regarding how intelligence is to be viewed. No longer is intelligence considered to be fixed or single-faceted. Prominent among those who have contributed to this expanded view of intelligence are Robert Sternberg and Howard Gardner. Sternberg (1986) conceptualized a triarchic theory of intelligence that focuses on three mental processes to explain an expanded and more accurate view of intelligence, and Gardner (1983) provided a theory of multiple, relatively independent intelligences. Both theories have contributed to a reconceptualization of what constitutes intelligence and how it should be measured.

Those who support cultural difference, cultural diversity, and culture-specific views of ability have repeatedly affirmed the notion of different kinds of intelligences. However, their advocacy efforts have not been in support of a single measure of intelligence. Their recommendation simply has been to use scores from tests along with other criteria to assess for gifted potential.

Almost no one disagrees in principle with this recommendation to use tests as one piece of information when making decisions for placement in gifted programs. However, in practice, there does not yet appear to be active endorsement of this principle. Performance at a specified level on an intelligence or achievement test is still the primary method used to certify children as eligible for gifted programs. Current findings and discussions on intelligence and its evaluation make it increasingly clear that a solution must be found to eradicate this discrepancy between recommending multiple criteria in principle and relying on a test as a sole measure of exceptional ability in practice (Frasier, 1991a).

Multicultural, Cross-Cultural, Cultural-Context Perspectives

In a very provocative article, Kitano (1991) suggested that a multicultural education perspective can help bring much needed clarity to issues of practice in serving the culturally diverse gifted. She suggested that such a perspective would cause educators of underrepresented gifted learners to articulate, reflect on, and perhaps modify their values with regard to cultural diversity.

In a response to that article, Frasier (1991c) agreed with Kitano but questioned whether such a perspective would be sufficient to address the persistent issues and misperceptions associated with identifying and serving culturally diverse gifted students. Frasier suggested that the answer would be an unqualified "yes" if a multicultural perspective was equally applied across all groups, regardless of race, creed, gender, socioeconomic status, or handicapping condition. She suggested that the answer would have to be "no" if such a perspective was used only to apply to ethnic/minority groups.

In support of the cross-cultural, cultural-context perspectives, Rogoff and Morelli (1989) emphasized the need for cultural research with minorities to focus on examining the processes and functioning of the cultural context of

development if a deeper and broader understanding of human nature and nurture is to be developed. However, when observing ethnic/minority children and interpreting their behaviors, the emphasis should be on the individual child, with attention given to the inter- and intragroup differences in values and other cultural characteristics (Maker & Schiever, 1989). That is, individual factors, rather than membership in a particular cultural group, are recommended as the basis for comparison.

Program Applications of Current Initiatives

Specifically focusing on the diversity within gifted populations, searching for unique characteristics, using qualitative and quantitative data to make decisions for placement and instruction, specifically focusing on gifted behaviors, viewing intelligence as multiple and componential, adopting a multicultural perspective, and using a cultural-context approach were discussed as examples of new initiatives in gifted education that appear to be pushing the field toward new paradigms. Each of these initiatives has important implications for improving the way gifted ethnic/minority children are identified and served and for improving the way gifted children in general are identified and served.

Future Implications

Increased attention has been paid to improving methods for identifying giftedness in ethnic/minority groups. But where do we go from here? Some basic elements to guide future endeavors include the following (Maker & Schiever, 1989):

- Recognizing the diversity within cultural groups as well as differences between cultural groups when designing identification procedures, curriculum, and instruction
- Recognizing the influence of language when assessing for giftedness
- Focusing gifted programs for ethnic/minority students on the development of abilities valued by them, valued by their culture, and necessary for success in mainstream culture

One of the most obvious implications of the suggestions offered in this chapter is that following the best practices in gifted education provides the best guidelines for better serving gifted ethnic/minority students. The following principles are offered as a guide (Frasier, 1990b). In school districts where these principles have been applied and where data from a variety of test and nontest sources were interpreted from a profile, the enrollment of ethnic/minority students in gifted programs has increased from 3% to 22%.

1. *Focus on the diversity within gifted populations. The gifted are not a homogeneous group, nor do they express their talents in the same way.* The diversity in gifted populations has always been recognized by practitioners and researchers. There is no such thing as "the gifted child." Gifted children differ as much from each other as they differ from those whose gifts and talents are not extraordinary. The most noticeable things about them are their potential and the diverse ways in which they express that potential. The procedures used to identify gifted children must be as diverse as the ways in which they demonstrate their potential.
2. *Adopt a goal in inclusion, not exclusion.* The identification of children whose adult performances will warrant the label of giftedness is, and always will be, an inexact science. There are numerous examples of people who were not recognized as having potential for superior performance during their childhood. One good way to describe the need to be more inclusive is to cite the epitaph supposedly engraved on a

tombstone in Connecticut: "I told you I was sick." It seems that educators would be safer to err on the side of inclusion, rather than exclusion.

3. *Data should be gathered from multiple sources; a single criterion of giftedness should be avoided.* A continuing hallmark of recommendations for identifying potential in children is the use of multiple criteria. The complex, multidimensionality of giftedness requires that no conclusion about a child be reached on the basis of a single piece of information.
4. *Both objective and subjective data should be collected.* This recommendation reinforces number three above. To say it another way, data should be gathered from test and nontest sources. Tests are not sufficient to assess all the dimensions of ability. Educators should not rely on test data alone to find students with extraordinary potential.
5. *Involve educators and noneducators who represent various areas of expertise and who know the child who is being observed.* The display of gifted potential does not just occur at school; giftedness is a 24-hour phenomenon. Persons inside and outside the school should be involved in any process to identify extraordinary gifts and talents. Educators have the responsibility to provide information about behavioral indicators of giftedness. Their responsibility requires that they get information from not only teachers but also others, such as parents, peers, and community persons familiar with the child.
6. *Implement an identification program as early as possible. plan it as a series of steps, and find a way to make it continuous.* Educators must always be sensitive to the fact that some children demonstrate their extraordinary abilities early; others do so later. They must try to avoid one-shot performance evaluations. They must plan an identification program that consists at least of a screening phase, an evaluation phase, and a recommendation phase.
7. *Give special attention to the different ways in which children from different cultures manifest behavioral indicators of giftedness.* The cultural context in which a child develops is important to recognize. For example, there are many culturally based differences in the way children demonstrate their ability to communicate effectively. Thus, the focus should be on how they use a communication tool, not on how much of it they have.

8. *Decision making should be delayed until all pertinent information on a student has been reviewed.* It is imperative that decisions not be based on incomplete data. All students who are nominated should be considered; decisions should not be made until a complete review can be made of all data collected from multiple test and nontest sources.
9. *Data collected during the identification process should be used to help make program and instructional decisions.* Identification is a useless, time-consuming process unless the information gained is used to make decisions about how to best place a student in an appropriate learning environment.

Finally, it should be clear that a search for better ways to identify and serve ethnic/minority gifted students must happen within the context of the search for better ways to identify and serve *all* gifted children. In the end, the goal must be to find those children with exceptional potential and to provide them with appropriate learning experiences to develop that potential. This is their right, regardless of racial or ethnic group membership, gender, wealth, or handicapping condition.

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School Reform and Restructuring: Relationship to Gifted Education

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Introduction

As American society turns its vision toward the future, it is with an entirely different perspective from that which was anticipated for the second half of the 20th Century. Post World War II America saw limitless horizons for itself while the rest of the world looked to the United States as the model to meet and to ultimately surpass.

Now a different set of realities has appeared. America's leadership position in many areas is seriously challenged. Although the launching of Sputnik in 1957 led to a short-term national focus on science, mathematics, and technology, the nation became most aware of the leveling of its international position during the seventies. From Vietnam to Watergate to OPEC (Organization of Petroleum Exporting Countries) to "Corporate Japan," America's belief in itself has been severely shaken.

The trust and confidence formerly placed in America's leaders have given way to distrust with increased questioning, resulting in demands to reestablish this nation's past superiority. Today, American business and governmental leaders are demanding that education develop the technologically literate workers necessary to regain international preeminence. Since *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education, 1983), education in the United States has been found to inadequately prepare the "human capital" necessary for tomorrow.

Restoring Superiority Through Education

How then, given the current environment, can America regain the strong international position its people expect? Increasingly, the answer is said to lie in an educational process that is significantly different from current practice. In *Winning the Brain Race,* David Kearns and Dennis Doyle (1988) spoke of American business as falling behind foreign competition that is better organized. They provided a vision of the type of employee necessary for today's world: "The modern employee must be more highly educated, better informed, more flexible than ever before" (Kearns & Doyle, 1988, p. 9).

Kearns and Doyle further pointed out that successful companies have discarded archaic, outmoded, and thoroughly discredited practices that are still in place in most school districts which are "organized like a factory of the late 19th century ... a system designed to stifle creativity and independent judgment" (Kearns & Doyle, 1988, p. 9). They also stated that educational excellence is undoubtedly our most serious national problem. The seriousness of the authors' assertion on excellence was evident as they compared education to Kearns' company, Xerox, which had to "... change or die" (Kearns & Doyle, 1988, p. 11).

Good organizational practices were also exposed in *In Search of Excellence* (Peters & Waterman, 1982) and *A Passion for Excellence* (Peters & Austin, 1985). *In Search of Excellence* called for a commitment to the development of innovative people, with a need for such people throughout organizations, all persisting in the pursuit of innovation. *A Passion for Excellence* made a strong case for a revolution in leadership, where the manager is the leader who champions innovation. Peters and Austin stated that to sustain

superior performances, innovation is required. Business studies of excellence focus on people and innovation; excellent businesses are built on innovative people who embrace change.

- Alvin Toffler (1970) looked into the future and made interesting predictions. He identified most of the issues addressed in the business excellence reports in his book *Future Shock*. Toffler spoke about education's future objective being to significantly increase the coping skills of the individual: "It is no longer sufficient for Johnny to understand the past.... (He) must ... learn to anticipate the directions and rate of change (of the future) and so must Johnny's teachers" (Toffler, 1970, p. 346).

Toffler's views complemented the business excellence studies addressed in *Re-inventing the Corporation*, which stated, "Today's ill-prepared graduates become tomorrow's corporate burden.... But most important, as we approach the seller's market, a shrinking labor pool of entry-level workers will bring companies face-to-face with the prospect of hiring graduates who are even more poorly qualified. This represents a far-reaching threat to the promise of prosperity in the new information society" (Naisbitt & Aburdene, 1985, p. 170).

Further threats extend to national security as former Secretary of Defense Carlucci, in *America's Next Crisis* (The Aerospace Education Foundation [TAEF], 1989), called for the education community to correct, with industry's help, our national technical illiteracy because of its threat to national defense.

The business excellence studies and the future-oriented reports provided some of the reasons for an increasing concern about education. *A Nation at Risk* clearly pointed out the threat of an educational system that is failing to meet the nation's needs. In *America's Next Crisis*, which focused on the inexorable and pervasive nature of the risk, education is viewed as the keystone of our nation, as the primary system for developing our nation's human capital. Yet, this study addressed a consistent weakness in higher-order thinking skills across all subjects on national educational assessments. Other studies following *A Nation at Risk* raised even further questions about the limits of today's educational system.

Significantly adding to America's dilemma are the demographics cited in *A Vision for America's Future* (Children's Defense Fund [CDF], 1989). This work pointed out that by the year 2030, one third, or 25 million of America's children, will be poor; this is nearly twice the number of poor children today. In addition, by the year 2030, minority children will constitute 41% of the child population.

To overcome these identified trends toward an increased "at-risk" population, *A Vision for America's Future* called for setting clear national, state, city, community, and personal goals for child survival and development, and investing whatever leadership, commitment, time, money, and sustained effort are needed to achieve them. It further stated, "The cost of repairing our crumbling national foundation will be expensive in leadership, effort, time, and money. The cost of not repairing it, or patching cosmetically, may be fatal" (CDF, 1989, p. xviii).

Together, the diverse views referenced earlier point to a critical need for developing a shared vision for schools. A critical role of government is to support the development of a shared vision and to provide the "driving, powerful objective analogous to putting a man on the moon," demanded by former Maryland State Superintendent David Hornbeck in *School Reforms: A Status Report* (Research for Better Schools, 1989, p. 1).

Serving the Gifted and Nongifted

In meeting our nation's present and future needs, all of our gifted and talented students must be identified and developed. *Workforce 2000: Work and Workers for the 21st Century* (Johnson & Packer, 1989), a Hudson Institute Study, and *A Vision For America's Future* showed that these students will increasingly be economically disadvantaged with limited English proficiency, while at the same time they will decreasingly be white males. Adding to the seriousness of the situation is the fact that our national labor pool will shrink as the work force grows at its lowest rate since the 1930s. The fundamental need to identify the currently underrepresented able student is addressed by Harry Campbell, a senior assistant technologist at TRW, Inc., in *America's Next Crisis:* "One of our concerns in a high-tech industry is that there are kids out there who have the talents but who are getting lost in the system" (TAEF, 1989, p. 20).

A key question needs to be resolved: How can the wave of school reform and restructuring relationships be utilized for the benefit of meeting the educational needs of all children? As school reform and restructuring emerge as the responses necessary for today's and tomorrow's schools, gifted education leaders have an opportunity to guide school improvement through changes resulting in a total school program responsive to all students' needs.

Equity v. Excellence

At the root of any query about meeting the educational needs of children in the United States is the balancing that must occur between equity and excellence. Because of the limited resources available, as well as historical and legal parameters, separate programs or tracks come under fire as being elitist or even discriminatory. To truly avoid the negative consequences of such perceptions, it is fundamental to resolve the equity v. excellence issue in a positive fashion for all, regardless of perceived abilities. This is truly a situation calling for a win-win or cooperative process.

The resolution of the equity/excellence dilemma requires leadership and guidance to move out of the old paradigm of the industrial or assembly line educational model. This old model defines all students as being the same, like some product moving down the assembly line, receiving parts and processes at predetermined intervals and not really enhancing individual differences. Shifting to a new paradigm, which focuses on quality and encourages creativity and independent judgment, can be accomplished through a redefining of equity and excellence. Under former definitions, these terms were interpreted, for the most part, as being mutually exclusive. However, with a quality-oriented paradigm, equity and excellence can be and, in fact, must be merged.

Equity becomes equality of opportunities afforded the individual student. With this view, the starting point is the individual, with the opportunities provided according to the uniqueness of the individual. Thus, different individuals may not receive exactly the same educational program; instead, they will be given equal opportunities based on their individual needs. *Excellence* fits into this process as the individual's specific educational needs are met and as that individual is enabled to progress as far as his or her abilities and desires will allow.

This paradigmatic shift will take leadership to promote, because acceptance must move from a process focusing on the system to one focusing on the individual. The "systems focus" model of the past plugs individuals into prearranged slots demanding conformity. The "individual focus" model molds the system to the individual while celebrating individual independence and creativity.

A major concern for educators of the gifted during these reform efforts is the prospect of being subsumed by general education in the name of systematic reform. The fear is that opportunities will be limited to those needed by the majority. This is a realistic concern about what may appear as a minor deviation from the full "individual focus" model. However, resisting the changing environment and fighting against the winds of change are reactionary. Educators of gifted children must use the same progressive, future-oriented vision expected of their students.

Advocates for the gifted have demonstrated "how the principles and requisites for the gifted and talented programs they espouse can expand the limits of the larger educational program.... Assuming that the goal of education reform is to improve the total education system for the benefit of all students, the development, expansion, and improvement of programs for the gifted are legitimate purposes and we have a responsibility and logical role to play in the realization of this goal" (Seaberg, 1991, p. 1).

Until the shift to the individualized, quality paradigm becomes accepted and clearly displaces the industrial model paradigm, the old equity and excellence definitions will continue to dominate. This definitional dominance will hinder the infusion and codification of gifted and talented education into the total educational program. "By remaining peripheral we have become extremely vulnerable. Gifted programs are being eliminated in schools all over the United States" (Feldhusen, 1991, p. 115).

Ability Grouping

Among the most divisive areas in American education is that of ability grouping. Increasingly, the premise of removing students from the mainstream of schooling and placing those students into homogeneous groups has come under fire. Nationally, the trend for students with disabilities has been to meet their specific needs within a program that, as much as possible, mainstreams these students into heterogeneous classes or into their least restrictive environment. This trend for heterogeneous groupings clearly has impacted gifted education.

In an analysis of current research utilizing meta-analytic techniques to evaluate findings on ability grouping, Kulik and Kulik (1987) reported that Slavin and Karweit (1984) found that "within-class grouping — in which students are assigned to different groups within a heterogeneous classroom according to aptitude or performance — is clearly beneficial for learners" (Kulik & Kulik, 1987, p. 22). Further, in a more recent study, "Slavin found that the evidence did not support the use of comprehensive, full day grouping of pupils into different classrooms on the basis of ability, but did support the use of within-class ability grouping...." (Kulik & Kulik, 1987, p. 22). Overall, Slavin concluded that ability grouping is maximally effective when it is done for only one or two subjects, with students remaining in heterogeneous classes most of the day; when it greatly reduces student heterogeneity in a specific skill; when group assignments are frequently reassessed; and when teachers vary the level and pace of instruction according to students' needs (Kulik & Kulik, 1987).

While most gifted educators agree that more research is necessary to better determine what is truly the best for able learners, the beauty of Slavin and Karweit's findings supporting within-class groupings in heterogeneous classrooms is that such a process bridges the equity/excellence dilemma. While educators are loathe to admit to political solutions to educational problems, the issue of ability grouping appears to be a compromise that can accommodate research findings. In the face of

current trends, within-class grouping can provide a process to meet the equity/excellence dichotomy during the shift of paradigms.

Organizational Strategies and Flexibility of Organizational Plans

Perhaps nowhere else in American education has the clash of paradigms been so obvious and intense as it has at the middle school level. The shift is from junior high school subject-oriented concepts to the more bridging middle school concepts, with individual emphasis accentuating the differences. The individual focus of middle level education is evident in the following recommendations: "The fundamental purpose of grouping learners should be to place them in settings that best meet their needs. For gaining many types of experience, heterogeneous groups present more natural and lifelike situations. In others homogeneous groupings may have some advantages. Neither completely heterogeneous nor homogeneous approaches deal responsively with the developmental variance among young adolescents" (National Association of Secondary School Principals [NASSP], 1989, p. 15).

The equity/excellence dilemma resurfaces. In reviewing what the experts have to say, on the one hand, homogeneous groupings for able learners are called for while, on the other hand, heterogeneous groupings are to be the rule. In fact, both are probably valid, except that the "preferred" system is placed above the individual learner instead of developing the system for the individual learners.

Equifinality means that there are many potential ways to reach resolution. Due to learner differences, varied techniques and processes are necessary to meet their needs. Focusing on heterogeneous v. homogeneous grouping results in a shift from the individual focus to the systems focus. It appears that the NASSP's Council on Middle Level Education recognized that dilemma: "Groupings should serve early adolescent developmental needs. Effective groupings depend to a large extent on adequate guidance in helping pupils select courses and co-curricular activities suited to their abilities and interests" (NASSP, 1989, pp. 15-16). Such a position was reflected by Schatz: "Our educational premise must be that of flexible pacing: the best education matches the pace of instruction with individual abilities, interests, to performance needs" (Schatz, 1989, p. 4). In effect, the individual student's need to achieve a quality education is based upon what that specific student needs.

A system based on the specific student is the antithesis of the industrial model. However, this individual focus is the wave of the future. Attempting to develop a specific organizational plan again endeavors to return us to the lock-step industrial model that focuses on the system rather than the individual. Schatz noted this problem: "The need to remove barriers and promote active learning is clear. Legitimate concerns exist, however, that in implementing new models, a 'lock-step' or 'one size fits all' curriculum may simply be reinvented" (Schatz, 1989, p. 1).

This view was further expanded in *The School of the Third Wave of Reforms: The Need to Go Beyond Current Structure:* "Flexibility to seek better ways and the commitment to evaluate one's efforts will be hallmarks of the third wave school. Institutional well-being cannot be mandated from outside, but the hope is it can be fostered from within. Changing mediocre educational systems into excellent ones necessitates policy transformation that is far more radical than accounting for absences, setting graduation requirements, logging instructional hours and taking competency tests. Can these more 'radical' changes take place while administrations and the public cling to an earlier vision of 'school'? The answer is no. The good

news is that a new vision of school is already taking shape and hopefully root as well" (Griswold, 1991, p. 10).

Equifinality enables us to know there are many paths to achieve a summit. For education, and especially for the education of the gifted and talented, the focus is on shifting to the individual learner and to the learners' teacher/facilitator. "An old adage states, in effect, 'If you want to change something, you must first understand it!' This insight includes understanding what seems to prevent something from changing" (Goodlad, 1989, p. 2).

Challenge to Gifted Program Educators

Educators of the gifted are in a position to lead American education into the new paradigm by embracing change and the future and by rejecting the restrictive structures of the past. Successful transition led and supported by educators of gifted and talented children will strengthen all of American education and increase opportunities for our most able learners. However, rejection of the emerging paradigm through focusing on narrow, backward-oriented issues could jeopardize much more than what is seen as simply gifted and talented education's future.

No one structure exists as a panacea for significant school reform and for the continued improvement in opportunities for gifted and talented students. Rather, each school must focus on its individual learners to develop programming that meets their needs. The new focus is on the quality of the individual, not on systematic uniformity.

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School Restructuring: Impact on Attitudes, Advocacy, and Educational Opportunities for Gifted and Talented Students

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Introduction

During the past decade, a blizzard of papers and commission reports on the need for national educational reform have been written. The inadequacies of public education have been regularly documented, and experts daily debate alternative solutions in the print and electronic media. As part of this new wave of educational reform, schools in America are being asked to "restructure."

Restructuring has been defined as a fundamental and comprehensive transformation of the traditional school organization and of the roles and responsibilities of school personnel within that organization. Restructuring calls for systemic change in the way that schools design and deliver educational programs and services. School restructuring has come to include a series of common components: changes in school governance, shared decision making by school staff in determining the mission and organization of the school, new ways of developing curriculum, new approaches to scheduling, and greater involvement of parents and community.

Societal Changes

For those concerned about the education of gifted and talented students, school restructuring offers new challenges and new opportunities. Each component of school restructuring offers rich options to identify, develop, and hone the gifts and talents of students in powerful and expansive ways. To enable this to happen, advocates for gifted and talented programs must join in the common task of transforming schools in response to many complex societal changes, including changes in demographics, family structure, and the workplace.

Changing Demographics: Student Diversity

The face of our society is changing at an ever-increasing pace. As the year 2000 approaches, Americans are becoming more ethnically, culturally, and linguistically diverse. According to the U.S. Immigration and Naturalization Service, more than 600,000 people emigrate to this country annually. The changing face of Europe and Asia is bringing a new wave of immigrants to our shores. Demographic forecasts tell us that one in every three people in the United States will be a minority by the year 2020.

There are economic changes as well. In 1986, 4.5 million women were in the work force but living in poverty, and more than half had children. Further, one in five children in the country now lives in poverty. In response, schools are being challenged to increase their capacity to identify, develop, and hone the gifts and talents of children from diverse racial, socioeconomic, and cultural backgrounds.

Changes in Family Structure and Interaction Between School and the Family

The majority of American women have now joined the work force and abandoned the role of full-time homemaker. In recent years, there has been a dramatic increase in the numbers of single-parent families. Many of these families lack an extended family support network. In more than half of two-parent families with school-age children, both parents work full time. Many communities are concerned about the growing numbers of latchkey

children. Despite these changes in family structures, there is no national policy on day care.

Distance from school also has become a factor that affects interaction between school personnel and families. Children live at greater distances from the schools they attend. In many parts of the country, both children and teachers must commute to school. Unlike the past, parents and teachers are less likely to see one another within the neighborhood.

Schools that are restructuring are working to establish new organizational responses to these changes. For example, some schools are extending the school day by instituting a wide range of early morning and after-school programs. In other schools, personnel are exploring new ways of reaching out to parents — holding meetings at the workplace and at community sites and arranging early morning, evening, and/or weekend conference times. All of these efforts offer ways to respond to the changing needs of families and to engage families in the nurturance, development, and expression of students' gifts and talents.

Changes in the Workplace

The American workplace has undergone rapid changes in the past two decades as it has moved from the needs of a low-tech operation to the demands of a high-tech setting. Business leaders say that today's work force needs more than just competency in the basic skills, it needs highly developed critical thinking, problem solving and collaborative skills.

Many schools have not kept pace with the changing demands of the workplace and cannot meet these needs. They continue to provide rote learning and assembly-line approaches to delivering curriculum. Staff and curriculum from programs for gifted and talented students have much to offer in meeting the needs of all students to enter the 21st Century workplace. Schools that are restructuring can provide opportunities for those educators who are experienced in gifted and talented programming. These educators can assume leadership roles because of their experience in the teaching of critical and creative thinking and problem-solving skills.

A Vision for Gifted and Talented Education in Restructured Schools

School restructuring begins by developing a shared vision — a new way of seeing the school organization approach its mission — a vision that is shared by staff, parents, and community. What might such a restructured school look like? What vision might be developed for such a school? Patty Bruce Mitchell (1990) said it well:

> *In the schools we seek, all children, from the less able to the most able, experience challenging work which engages and instructs so that children learn to use their minds well. All children from the less able to the most able move along at their own pace. Each feels that the adults around them expect success and will watch closely to ensure success. The rich curriculum provides a center for, not the boundaries of, instruction. Teachers assume that adaptations and extensions will be needed for all children, based upon their learning style, rate and level. Teachers have the capacity and resources to provide these adaptations and extensions....*
>
> *In the schools we seek, highly able students and less able students do not compete for resources. Achieving success for all students is not equated with achieving the same results. Faculty and administrators understand that the differences in abilities among students vary widely. They work to bring the community into the education of all children but a special effort is made to draw the community toward students*

whose difference in ability require additional resources and support. Thus the community sees education of the most and least able as a challenge to be met, not as a problem which syphons off resources (p. 3).

Changing Attitudes: New Stakeholders

Historically, schools have been conservative, stable institutions that change extremely slowly and that embody traditional, time-tested values. Schools that are restructuring are willing to break with tradition and become risk takers by breaking new ground and reevaluating all aspects of school practice. Curriculum and pedagogy are being rethought in light of new research and demographic changes.

Several decades ago, society divided responsibilities between schools and families with certitude. The role of the schools was to teach, and the role of parents was to support schools in time-honored ways. Schools that are restructuring are willing to rethink these historical assumptions. They recognize that family support can no longer be assumed but must be cultivated and nurtured. These schools not only are reaching out to families but also are extending their outreach efforts to the broader community.

Social service organizations, museums, libraries, colleges and universities, and business and industry are becoming vital partners in the life and mission of the school. Taken together, there is new potential for greater understanding of student needs and renewed advocacy for the full development of students' gifts and talents.

Helping Students to Advocate and Celebrate Student Diversity

Every student receives a message about school, about how it feels to be in the school, and about how it feels to be one's self in the school setting. The ethos of the school is frequently referred to as school climate. Restructuring schools means paying attention to the school climate and having students see that the expression of their gifts and talents is welcomed and valued. Restructured schools are making conscious efforts to model and support the cultural and socioeconomic backgrounds of their students through the composition of their staff and the nature and content of their curriculum.

School climate is concerned with human value — from the way people are treated in textbooks to the types of art work displayed in a school's halls or corridors. Respect, support, cooperation, and conflict resolution are all important aspects of school climate. Students become advocates for themselves and for the school as they contribute their gifts and talents to a wide range of learning experiences, including community service, mediation, and other types of school and community leadership projects.

Impacting Mainstream Curriculum Reform

Restructuring calls for particular emphasis on addressing the needs of at-risk students who are in danger of failing and becoming future dropouts. In general, society has not thought about gifted and talented students as part of the population of students at risk. Instead, these students have been perceived as being better at "doing school," at performing traditional school tasks.

Educators in programs for gifted and talented students know better. Many of these students have indeed been at risk; they have been unchallenged, unsupported, and unattended to. Special programs for gifted and talented students have frequently failed to address their needs. Frequently, students were offered a pullout program for two or three hours a week, but no curriculum modifications were made during the rest of the time.

In schools that are restructuring, new opportunities exist to provide challenge, depth, and academic rigor. There is strong focus on the development of broad-based themes and interdisciplinary curricula, always stressed in programs for gifted and talented students. Students are being asked to link concepts across disciplines, to think on their feet, and to speak and write persuasively about things that are important to them. Students are able to choose from a large menu of options tailored to individual inclinations, talents, and abilities.

Schools that are restructuring are using systems of assessment that rely on exhibitions of mastery and portfolios of students' work over time. These schools are experimenting with schedules; longer periods and interdisciplinary courses are allowing students to pursue topics and interests in considerable depth. In addition to greater flexibility in the use of instructional time, varied grouping arrangements are being used to promote student interaction and achievement beyond conventional age-based groups. At these schools, teachers are guides, coaches, and mentors.

Advocacy Through Family Involvement

Research has confirmed what experience has always told us: Family involvement in their children's education is basic to the success of their children in school. Parents are the children's first teachers at home and continue to serve in a teaching capacity when the children enter school. Schools that welcome families not only will benefit from their support but also will be better able to understand and address the gifts and talents of the student population.

In many schools, family involvement now means a departure from traditional home-school activity. School personnel understand that there are diverse ways in which families can become involved in their children's education. If some parents are not going into the school, the school may need to go to the parents. Schools must be willing to experiment with new approaches that address family needs for flexible time frames, child care, and transportation. Schools may also need to adopt an expanded definition of their mission and collaborate with other community service providers in reaching out to parents whose circumstances prevent them from being as involved as they may want to be in their children's schooling.

Schools can build on relationships that families may have with community organizations and agencies, particularly families who are under-involved in the school. Partnerships with these community resources will help schools bring information to families in familiar and comfortable settings. These interactions will also demonstrate the school's respect for families and their cultures, its understanding of barriers that limit parental involvement in school, and its desire to address family needs and concerns. School personnel can build advocacy for gifted students by consciously focusing on new approaches to family involvement.

Building Community Advocacy Through Community Service

Schools that are restructuring are making serious efforts to engage gifted and talented students in active learning experiences. Through such projects, students gain new insights about how they want to relate to others and to themselves. They become empowered to use their gifts and talents and learn a great deal about becoming socially responsible adults.

School personnel are engaging students by highlighting real life needs. Students can apply and develop their gifts and talents by working on a range of community concerns from issues related to the elderly and day care to environmental problems, such as waste management and recycling. Service learning helps students to understand the relevance of their course

work and, further, to test their learning against the reality of the world around them. Educators of gifted and talented students know that there are few better ways to inspire a student's interest than by allowing the student to analyze a real-life problem.

However, service learning is more than exposing students to complex problems that demand complex solutions. Students are able to assume leadership positions in which they learn important skills of working on a project and seeing it through to completion. Ultimately, the experience prepares these students to become educated and confident citizens. Once exposed to the needs of the community and challenged by the responsibility of helping others, young people increase their sense of community involvement. In response, community members become advocates for these students. There is enhanced recognition of the importance these gifted students have to the future welfare of their neighborhood, their community, and the world.

Building Advocates Through Business Partnerships

A number of schools have formed significant new relationships — school-business partnerships. Many of these school-business partnerships are benefiting from the shared information on the realities and needs of the workplace, which is integrated into the students' course work. In addition, some schools are becoming adept at integrating technological advances into their learning environment and providing students with experiences in businesses and other community settings that make curriculum relevant and compelling. Partnerships with businesses are helping schools to restructure by supporting the upgrading of curriculum; encouraging research and development in curriculum revision; and helping to develop flexible, participatory learning opportunities that capture and maintain the students' interest in learning.

Most business people know that organizations cannot change easily without outside support. In schools that are restructuring, business leaders are often providing that support. They are having dialogue with school leaders and helping them to restructure through assistance with strategic planning, systemwide analysis, and deployment of resources. Among other outcomes, these efforts enable business leaders to appreciate the importance of serving as mentors for gifted and talented students. Specifically, business leaders are working to:

- Implement systemwide self-assessment, which can become the basis for strategic planning and partnership goals. This self-assessment is an excellent starting point for partnerships that can ultimately lead to advocacy.
- Help schools to develop a vision and an operational definition of the school's mission. Such a mission statement provides the foundation on which schools set their own policies, programs, and practices.

Through partnerships with schools at the local level, businesses are addressing the development of gifted and talented students by:

- Establishing business site internships for administrators, teachers, and students, which expose them to industry needs and expectations for the 21st Century
- Assisting in the introduction of performance-based assessment that rewards and motivates competence, initiative, and creativity for staff and students alike

The National Alliance for Business (NAB) reports that "not only students but also teachers, principals, area administrators and the superintendent need to be held accountable" (NAB, 1989, p. 5). Schools have traditionally measured student performance through grades and test scores, but richer and more varied measures of student performance are needed. Increasingly, business leaders and others are asking for samples of students' work; they are asking to see portfolios and demonstrations of mastery that will show what students have learned and accomplished. Gifted and talented students are flourishing with this approach to assessment because it supports in-depth understanding of subjects and concepts. In turn, businesses become advocates for the needs of gifted students and become supporters of school programs and practices that set high standards of excellence.

Summary

In summary, to achieve desired outcomes for gifted and talented students, the goals for all students within restructured schools must be called to mind. Parents, school personnel, and community leaders must wrestle with the following essential questions:

- What should all students know and be able to do as a result of their educational experiences?
- How are student growth and progress assessed in meaningful ways?
- What are the school's unique responsibilities in serving students who are gifted and talented?
- What are the shared responsibilities of the families, the school district, and the community-at-large in meeting the needs of these students?

Schools that restructure are creating a sense of shared responsibility among all the stakeholders. They are experimenting with new ways to respond to the changing structure of families and to the changing demands of the 21st Century workplace. They are developing approaches that identify and serve gifted and talented students from diverse backgrounds and diverse socioeconomic, ethnic, and racial groups. These schools are forming creative school-business partnerships to address issues of content, curriculum, and accountability for students and teachers. They are developing a multipronged advocacy base that will ultimately enhance the structure, learning experiences, and expectations for all teachers and students in a restructured school.

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Community Links as Resources

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Introduction

During the last decade, parents and business leaders have expressed strong concern about the quality of education in our country and have sought to become more involved in the planning and implementation of school experiences. Personnel in some school districts have viewed this as an unwarranted and even unwelcome intrusion, while others have been more accepting.

This trend of community involvement has strong potential for improving gifted education. Neglecting such involvement could have serious negative consequences for gifted education. This chapter focuses on some of the most important issues in cultivating community resources.

Meeting Affective Needs of Gifted Children

Bridging the Gap Between Home and School

A most important and enduring problem in meeting affective needs of gifted children is bridging the gap between home and school. Affective needs of gifted children optimally should be met through cooperative efforts. However, tensions and misunderstandings often exist between parents and school personnel, thereby preventing positive actions and also potentially being emotionally harmful to the students. Meaningful home/school partnerships seldom exist, and there is often a sense of alienation and distance — even suspicion and distrust — or, at best, a sense that the other party is irrelevant.

Parents of gifted children commonly complain that school personnel are unsupportive, disinterested in their children's special needs, or even hostile. The frustration of these parents often leads them to feel extremely angry. School personnel, on the other hand, relate that parents of gifted children are demanding of special factors, are overly critical, and do not understand either appropriate educational activities or the limitations under which schools must operate.

Parents of gifted children are often seen as an elitist group of "unguided missiles," and parent advocacy groups are seen as rabble rousers. Simultaneously, the parents often view the schools as being unresponsive, advocating mediocrity, supporting the "mainstreaming" of gifted students, and forcing gifted students into a Procrustean bed with uniform curriculum designed for the average or below average child.

Too often, perhaps even typically, there exists an "us versus them" mentality between school personnel and parents of gifted children. This is unfortunate because during such struggles, the child, who is the object of the whole educational endeavor, tends to become lost in the process.

How can the gap between home and school be bridged? How can that chasm that seems to have widened in the last several decades be narrowed or even eliminated?

Both parents and educators must recognize that our society has an enduring ambivalence with the purpose of education, particularly public education, and even more ambivalence about education of the gifted and talented. Our nation's leaders talk at length about the need for our brightest youngsters to lead us into the 21st Century, but these same leaders provide little support — financial or otherwise — for truly excellent, challenging and individualized education for these high potential youngsters. This ambivalence appears to stem from what Tannenbaum (1990) described as the conflict between equity and excellence in American education.

Because gifted children are by definition exceptional, they require different educational experiences. But differentiated and individualized education often, though not necessarily, is the antithesis of a system. And certainly some systems are more rigid, while others allow for more flexible pacing options (Cox, Daniel, & Boston, 1985).

Changing school districts to meet the needs of gifted children can be very difficult, particularly in the current educational climate that is so opposed to ability grouping and advocates heterogenous grouping for cooperative learning. To accomplish such change, educators and parents need to work together.

In many communities, a change in posture and attitude is needed by both the parents and by the teachers. Parents must recognize that teachers are professionals and, as such, few teachers actively seek to be malicious or neglectful toward gifted children. Parents must realize that schools historically have reflected the values of communities, rather than leading the way to set standards. Education systems do what society asks them to do and, thereby, keenly reflect the cultural ambivalence society has about education in general and gifted education in particular. Teachers must recognize that caring parents want the best for their children (and should want the best) and that parents often have information about children not possessed by the teacher.

Beyond exhorting these attitude changes, there are also some general behaviors that can help overcome the gap. In some school districts, the problem is getting parents involved, knowledgeable, and responsible. Substantial documentation exists concerning the importance of parental involvement in enhancing a school's quality of education and in increasing parental satisfaction with the effectiveness of the school (Flaxman and Inger, 1991). To get parents involved, often a straightforward invitation to form a parent group will suffice.

In other school districts, the problem is getting schools or communities to rethink their position on gifted education because many view gifted education as elitist and, therefore, undesirable. Where elitism is raised as a concern, the approach most likely to work is to contrast the operations of the school district's gifted education program with its athletic program. A comparison of policies and procedures for implementing these programs helps to bring out society's values and unrecognized attitudes regarding the community's ambivalence toward gifted education.

For a particular child, however, such general approaches are usually not helpful in producing cooperative actions to the satisfaction of those involved. In particular, disagreements seem to arise most often in the following areas:

- Whether or not a child is identified as gifted
- Expectations that may accompany a child identified as gifted
- Unrealistic expectations or expectations that are not jointly shared by home and school
- Questions about early entrance, grade advancement, or continuous progress
- Attitudes about elitism
- Handling stress
- Deciding who is responsible for what actions

Resolving such disagreements usually involves mediation, due process, or, as a last resort, legal remedies. As noted later in this chapter, there is an increasing amount of legal and quasi-legal literature concerning appropriate education of gifted children, all of which reflect instances where understanding, communication, and cooperation have broken down.

Affective Strategies for Parents

Despite the cultural ambivalence and other factors that may generate a problematic milieu, there are specific actions parents can take to meet the affective needs of gifted children.

However, several particular hindrances, most of which do not stem from giftedness per se, must be recognized. All have major negative intellectual, academic, and affective implications, although some authors, e.g., Piirto (1992), might disagree with the negativity. Some of them cannot be changed by parents or schools, while others can be. Ten hindrances are prevalent in our current society:

- Poverty and low socioeconomic status
- Drugs, including alcohol
- Minority group status
- Family disintegration
- Harsh, inconsistent punishment
- Overconformity to societal expectations
- Perfectionism by the parents
- Rewarding indiscriminately the child's behaviors (i.e., "gold and garbage" alike)
- Emotional problems by family members (e.g., insecurity, depression, and low self-esteem)
- Chance

By contrast, 10 particularly key behavioral patterns support or enhance the development of intellectual potential:

- Closeness, communication, and affection with at least one mentor
- Being in an atmosphere of optimism and high expectancies
- Acceptance of the child's feelings, though not necessarily the behaviors
- Modeling and treating the child with honesty and trust

- Consistency in discipline and expectations
- Seeing parents, teachers, and other role models taking risks
- Allowing the child to take risks through establishing the fewest possible rules, except for the child with attention deficit disorder
- Self-reflection, self-understanding, and appreciation of oneself as an individual
- Development of a sense of humor
- Chance

It is not possible to succinctly describe ways to overcome the hindrances and to adopt the recommended behavior patterns; books have been written on each of these subjects. Indeed, the very presence of these books that focus on behavioral and emotional patterns of gifted children represents a major advance during the last decade regarding gifted children.

Similarly, there has been an increased focus on affective needs by state and national associations concerned with gifted children. For example, the National Association for Gifted Children formed a Parent and Community Division and a Guidance and Counseling Division. Recurring themes in the meetings of these divisions are the joint inclusion of parents and teachers, and a focus on affective needs. Similar efforts have been undertaken by the Supporting Emotional Needs of Gifted (SENG) program at Wright State University, the Gifted Child Society of New Jersey, and the College of Education at the University of Northern Colorado. Such efforts did not exist until the last decade.

Most importantly, however, parents need to have the opportunity to meet and share parenting experiences with each other. Through such interchange, parents feel less alone and more empowered to meet their children's affective needs. In such a forum, parents are able to "swap parenting recipes" and to decide more specifically which actions are appropriate (or inappropriate) for their children and their family. Discussion and support groups are as important for parents of gifted children as for any other group of exceptionality.

Promoting Community Support for Gifted Children

Obtaining Support Through Marketing

As emphasized in the preceding section, community awareness and support are extremely important. The strong community support for varsity sports or school bands has not been simply accidental. The support occurred because efforts marshaled community acceptance. The implication seems clear: support through marketing is needed for gifted education.

One difficulty in marketing gifted education is the name of product — *gifted* education. Parents, teachers, administrators, and the students themselves regularly report a strong sense of discomfort with the term.

Another problem arises from educators' own discomfort with the product. Educators themselves often have not resolved their own cultural ambivalence. Further, they may not be fully convinced of the worth of our product. They must, nevertheless, persuade others to get involved if they are to achieve community support and involvement.

Too often, educators and parents of gifted children talk only to each other and not to persons in decision-making positions or to those who shape community attitudes. State, local, and national conferences on gifted children need broader inclusion; otherwise it is the "converted" preaching to the "saved." Fortunately, the National Association for Gifted Children and The Association for the Gifted have demonstrated leadership in this area. However, more efforts are needed. The key leaders in communities need to be continually reminded that no society has ever been held in the highest esteem because of that society's high level of mediocrity.

Getting Others Involved (Mentorships)

After years of study, the Richardson Foundation (Cox, Daniel, & Boston, 1985) identified five programming options that held the most promise for providing appropriate educational opportunities for gifted and talented students. Internships and mentoring programs were among the most promising practices for flexible advancement and pacing.

In practice, however, mentoring programs have been severely underutilized. Gifted students have been enjoined to participate in field trips, artist-in-residence programs, and job-shadowing, but they have seldom participated in true mentorship experiences, despite obvious benefits. Mentoring relationships affect and benefit the mentors, the students, the faculty, and the schools in many ways.

Mentorships provide excellent opportunities for businesses to become involved in education in meaningful ways and to increase the resources for gifted students. Students hone thinking skills and develop creativity. Situations demand that students be real-life problem solvers because they consistently confront questions and seek answers. Mentorships have been shown to result in increased self-esteem for students who experience successful solving of real-life problems (Reilly, 1992). And both mentor and mentee find new ways to respond to problems within mutual fields of interest.

Mentorships provide unique opportunities for students to develop skills in diverse areas and provide the connections between work and school that are necessary to hold the interest of gifted students. Schools, in more traditional offerings, cannot provide such a variety of in-depth experiences that have real-life emphasis and that often involve the use of sophisticated equipment. The impact of real-life actions connect with work in the classroom. For example, while observing veterinarians reconstructing a tail for a peregrine falcon, a student sees the usefulness of advanced algebra and trigonometry. While writing copy for an advertizing agency, a student sees the need to proofread and edit written material.

For many students, mentorships help to develop a clearer definition of career options, a particular problem for many gifted youngsters who have multipotentiality or whose interests are unusual and arcane. Although gifted students are usually encouraged to believe that they "can do anything" as a career, they simultaneously may feel pressure resulting from high expectations of others. Mentors are often best equipped to provide guidance.

Additionally, students benefit from the inspiration generated by a role model. Mentors offer their mentees encouragement, advice, and counsel; help with career moves; and provide inspiration. The visibility and excitement of being exposed to powerful people adds another dimension.

Mentoring programs allow students to gain a more mature sense of responsibility and direction. Mentees choose topics and focus, select a mentor, work with others, and complete projects for which they have

substantial responsibility. Participating in a mentoring program involves moderate risk, another motivating factor for gifted students. Research has indicated that moderate risk taking increases performance, persistence, sense of competence, pride, satisfaction, and self-knowledge. The tolerance for errors and the pleasure of succeeding where success is not guaranteed are important as well.

Mentoring programs also influence staff (Reilly, 1992). The opportunity to work one-on-one with an enthusiastic student, along with the additional classroom resources and professional development, results in increased satisfaction with work roles. Observing and guiding students who create meaningful products adds to a teacher's sense of satisfaction, not only because the student demonstrates greater knowledge and skills, but also because the student manifests more appropriate interpersonal behaviors, such as communicating, coping, and being responsible.

Student interaction with both their mentors and their teachers can lead to positive implications for the education of those students who did not participate in a mentoring program. Mentors may volunteer, or teachers may invite them, to speak in the classroom.

Mentors commonly report benefits to themselves: rejuvenated spirit and enthusiasm, clarified goals, renewed hope for the future; and fresh new ideas from the student. Many mentors feel that they have accomplished some of their goals through their mentee's efforts, particularly since mentees often undertake projects that mentors cannot accomplish because of other priorities. Some mentors even report a change in their sense of self, new friendships, and increased opportunities.

Mentoring also affords the mentor an opportunity to assist new talent to enter the profession, often repaying past favors when they themselves were similarly mentored. Most people readily recall those who supported their entry into a field and recognize the value of that assistance.

Establishing a mentoring program may provide a challenge, particularly in meshing the organizational structure and philosophies of business with those of education. Employers must allow their employees to engage in the mentoring process, which often is initially inefficient from a business viewpoint. Because they do not follow a traditional classroom format, mentoring programs can challenge educators as well. For a mentoring program to work, both the educational and business perspectives must be involved, with recognition of the vast differences between the two. As Roseneau (1982) noted, the structure and organization of public school systems is as different from large profit-making corporations as rural roadside apple vendors differ from fabricators of nuclear submarines.

Despite their differences, theorists confirm that education and business can successfully collaborate. Businesses must become involved very early in planning school/business partnerships, and the partnership coordinator must be politically aware and sensitive to differences between the public and private sector.

Although businesses may offer to become partners in education, educators may be wary of their intentions and, therefore, reluctant to accept business participation in school endeavors. Educators sometimes believe that the business community's involvement stems from self-interest, rather than from a desire to help students.

It is important to realize that goals of schools and businesses are not contradictory. Business may achieve some overall corporate goals through

investing time and resources in a mentoring program. Besides increased well-being and satisfaction of employees who chose to mentor, businesses may help to promote educational change, improve the quality of future employees and citizens, and make a contribution to their communities. Companies can promote good public relations as well as generate marketing benefits.

Recognizing the severity of the nation's educational problems and their impact on business, the business community has recently exerted efforts to influence school operations. Large corporations such as Exxon and Polaroid have implemented programs that attempt to deal with educational problems that impact directly or indirectly upon business.

Interestingly, small and medium-sized companies often have different motivations because they believe they lack the financial resources to engage in substantial educational endeavors. Such companies may be reluctant to extend leadership for school/business partnerships. They express concern about becoming involved in educational conflict. More often, they will support education for such altruistic reasons as civic pride, boosterism, social conscience, and corporate guilt.

Regardless of the size of the business or the motivation factors, historically the least exercised option for businesses that are dissatisfied with education is to form a partnership. But the existence of a mentoring program depends on a collaborative effort between schools and businesses, and businesses are increasingly interested in becoming directly involved in the quality of education in their communities. By June 1988, approximately 73,215 partnerships between schools and businesses had been established (Baas, 1991), essentially tripling the number from the previous five years. Almost three-fourths of these school/business partnerships involved small or medium-sized businesses. In June 1989, the *Wall Street Journal* noted that "business has become one of the radical elements in school reform."

Working together may help not only to generate mentoring programs but also to promote cooperative community commitment to other flexible educational options for gifted children. As such, mentoring programs serve as clear models for students, faculty, schools, and businesses working together — models that likely will be increasingly used in the future.

Using the Legal System to Influence Education

Lobbying for Legislation

During the last decade, advocacy efforts for gifted children most often have involved lobbying by organized groups, usually state associations, to enact or change state laws or regulations. These efforts have focused on passing laws that mandate certification of teachers, minimal standards for programs for gifted children, identification of these gifted students, and funding for gifted programs. Other advocacy efforts have included persuading state departments of education to issue rules and basic standards for establishing appropriate educational programs for gifted students.

The laws that have been passed have been necessary, but not sufficient, in providing for appropriate gifted education. The same could be said about many of the administrative rules, regulations, standards, and allocation of money by state departments of education. As a result, there has been recent increased emphasis on seeking remedies through case law (as contrasted to legislative law), and this increase will likely continue into the foreseeable future due to economic cutbacks and other obstacles.

Court Cases, Due Process, and Mediation

Increasingly, parents have used case law as an advocacy approach on behalf of gifted children, particularly in states (such as Pennsylvania) that have already enacted enabling legislation. Karnes and Marquardt (1991a, 1991b) pointed out that the legal process will be used in the future to bring greater protection for gifted children. They reported a surprising amount of case law, ranging from disagreements about early admission, to divorce and liability lawsuits where giftedness was an issue, to allegations of fraud against a school about falsely advertising the presence of a specialized program for gifted children.

Court cases will likely increase in number in the future and will continue to focus on the general areas of eligibility criteria, teacher certification, delivery of services, due process, and tort liability (Karnes & Marquardt, 1991a, 1991b). Even so, parents generally would be better advised to seek remedies through mediation and/or due process procedures. Lawsuits are expensive and time-consuming, often to the point of rendering issues moot because of the time delays.

But few parents understand the concepts and procedures involved in mediation and due process in the education arena. Educational law and procedures are complex, and few attorneys consider themselves experts in such areas.

If more community advocacy is to occur, then, it must go beyond achieving enactment of state laws. Heightened emphasis must be given to helping parents understand the concepts and procedures of mediation and due process as primary vehicles to implement such laws in order to achieve optimal education for gifted children.

Influencing the Training of Health Professionals

Professionals outside of schools provide diverse services for persons having emotional or interpersonal concerns. These services range from guidance and advice — given by pediatricians, family practitioners, nurses, and nurse practitioners — to active interventions administered by such mental health professionals as psychologists, psychiatrists, and social workers. Unfortunately, these professionals have not received, and continue not to receive, training in affective needs of gifted children and their families.

With rare exception, the training of community professionals fails to mention gifted, talented, or creative children. The only exception is in the field of psychology, where the Terman studies are often briefly cited as an example of longitudinal research regarding the educational and affective needs of gifted children. More recent research or clinical findings and implications regarding gifted children are not mentioned in textbooks and materials used to train education and health professionals.

This gap in training is ironic because, of all the mental health professions, psychology has played the biggest role in developing conceptualizations and measures of such key concepts as intelligence, creativity, talent, and related concepts. Even so, it is still not uncommon for graduate students in psychology to be told that when a person's IQ is above 130, intelligence testing is largely insignificant. Similarly, modern tests of intelligence continue to emphasize the lower end of the intellectual spectrum, in many ways even more so than was true 10 or 20 years ago. For example, the new revisions of the Wechsler Scales (WISC-R, WPPSI-R, WAIS-R) and the Binet, Fourth Edition, all have lower ceilings than the earlier Stanford-Binet.

In fact, despite having developed many of the concepts and measures used in the identification and assessment of gifted children, psychology seems to

have generally abdicated the area. Certainly, there are some notable exceptions, such as Robert Sternberg, who have posited interesting and challenging notions. But, otherwise, psychologists have left such matters to educators, most of whom are not explicitly trained in assessment or in specific counseling and therapy techniques to the extent that psychologists are. Even the school psychologists employed by educational systems have received very little training about gifted children; their emphasis most often is on serving children with disabilities as specified in P.L. 94-142.

Thus, although parents often turn to health and mental health professionals for understanding, guidance, and assistance with gifted children, the community professionals are typically ill-informed and reluctant to consider that high intelligence or creativity might have behavioral or health correlates. Most seem to assume the position that if these issues were important, they would have been taught in professional schools or would be written about in journals.

Although some articles have been written, few have specifically been labeled as being about gifted children. Such areas as anorexia, alcoholism, existential depression, obsessive-compulsive disorders, and allergic reactions have at various times been shown to be related to measured intelligence. Similarly, intelligence has been shown to be significantly related to the success of certain kinds of psychotherapy. Other studies have shown that gifted children generally reach certain developmental milestones earlier than other children.

Currently, there appear to be only a few efforts to educate health and mental health practitioners. In 1985, the American Association for Gifted Children (AAGC) convened a Health Professions Task Force, which resulted in the publication of *Reaching Out to the Gifted Child: Roles for the Health Professions* (Hayden, 1985). In 1989, partly as a result of the AAGC Task Force Report, the Michigan Office of Gifted and Talented convened representatives from nursing, psychiatry, psychology, social work, and other related professions to stimulate awareness and to promote more inservice education for these professionals. This project is continuing. The School of Professional Psychology at Wright State University in Dayton, Ohio, has developed specific course curricula for its doctoral psychology students, and its SENG program has organized symposia at American Psychological Association conventions and other meetings.

But these efforts are minuscule and need major expansion. State and local associations of these professional groups should be contacted directly and encouraged to include sessions on the characteristics and needs of gifted children and their families. These same associations should be encouraged to publish similar articles in their professional journals. And state associations for gifted children should invite key leaders from these other professional groups to attend and participate in their conferences on gifted children. Examples of topics are legion: attention deficit disorder and gifted children, learning disabilities in gifted children, counseling for gifted adolescents.

For parents who are seeking advice or who are faced with a mental health or counseling dilemma that is compounded by a child being gifted, the advice is more complex. The parents should expect that only the rarest health or mental health professional will understand or appreciate the characteristics of gifted children and the implications of these characteristics. Thus, the parents should look for an otherwise competent professional who demonstrates an openness to learn about gifted and talented children.

Often, the parents must then provide the professional with books, references, or other authoritative information; this is an unusual approach for parents to have to take when dealing with professionals.

Summary

It has often been said that gifted children are not gifted for only four hours per week (i.e., when they are in a specialized program). This true statement accurately implies that gifted children have the same intellect and other characteristics outside the school setting when they are in the community at large.

Community links regarding gifted children and their families are critical resources that have not been developed to the extent warranted. In the current climate of hard economic times, opposition to ability grouping, and the cultural quandary about excellence versus equity, community links become even more critical. Gifted education cannot function in isolation; to attempt to do so would have tragic consequences.

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Collaboratively Planning and Delivering Services to Gifted and Talented Students

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Introduction

Collaboration is certain to be one of the preeminent words of this decade. Collaboration is being discussed in the literature that describes the changes in society (Naisbitt, 1982), the workplace, homes, schools, and classrooms as the challenges currently facing our institutions and families are being addressed. With resources less abundant and needs at an all time high, working collaboratively to identify and solve problems is a strategy that is being employed more and more frequently. The collaborative process offers the most creative and responsive results because marshalling the talents of many individuals results in outcomes that surpass what any one individual can accomplish.

Historical and Philosophical Background

While experts in the field of gifted child education (Clark, 1988; Sellin & Birch, 1980; Smith & Renzulli, 1979) have long called for collaborative efforts with general education, little true collaboration exists. More frequently, there are cooperative relationships (VanTassel-Baska, 1991) in which general educators are informed as to what is happening in gifted child education programs or their assistance is requested in identifying eligible students. Using the definition of collaboration as "a coming together to focus on a particular problem or issue" (VanTassel-Baska, 1991, p. 253) there is scant evidence of collaborative practice between professionals in the general and gifted child education ranks.

This is surprising in that, historically, gifted students have spent a great deal of time in the general education arena. They have been enrolled primarily in programs offered as supplements to those in general education (Cox, Daniel, & Boston, 1985) or, in approximately 50% of the cases, have been enrolled full-time in general education programs (Council for Exceptional Children, 1978). As recently as 1990, only 48% of the states in the nation mandated programs for gifted students (Council of State Directors of Programs for the Gifted, 1990).

With program availability and appropriateness at a premium, it is not surprising that the achievement levels of gifted and talented students have been alarmingly low. Recent data from the 1988 International Assessment of Educational Progress (Callahan, 1990) indicate that the top 1% of students in the United States are not competing well with their peers in eleven other industrialized countries. These students are reported to rank last (12th) in biology and algebra, 10th in chemistry, and 8th in physics. Further, average Japanese students appear to achieve at a higher level in calculus than the top 5% of students in the United States.

While many factors may help to explain such circumstances, one clearly must focus on the current types of programs for gifted students and the paucity of early or articulated intervention. In studying the effects of program absence on skill development (Ness & Latessa, 1979), declining discrepancies were found between the number of skills mastered by gifted and nongifted groups when gifted students were not involved in specialized programs in kindergarten through grade 2.

With such evidence that gifted and talented students in general education classrooms are not reaching their full potential under the current structures of program delivery, it is vital to begin collaborative efforts in earnest.

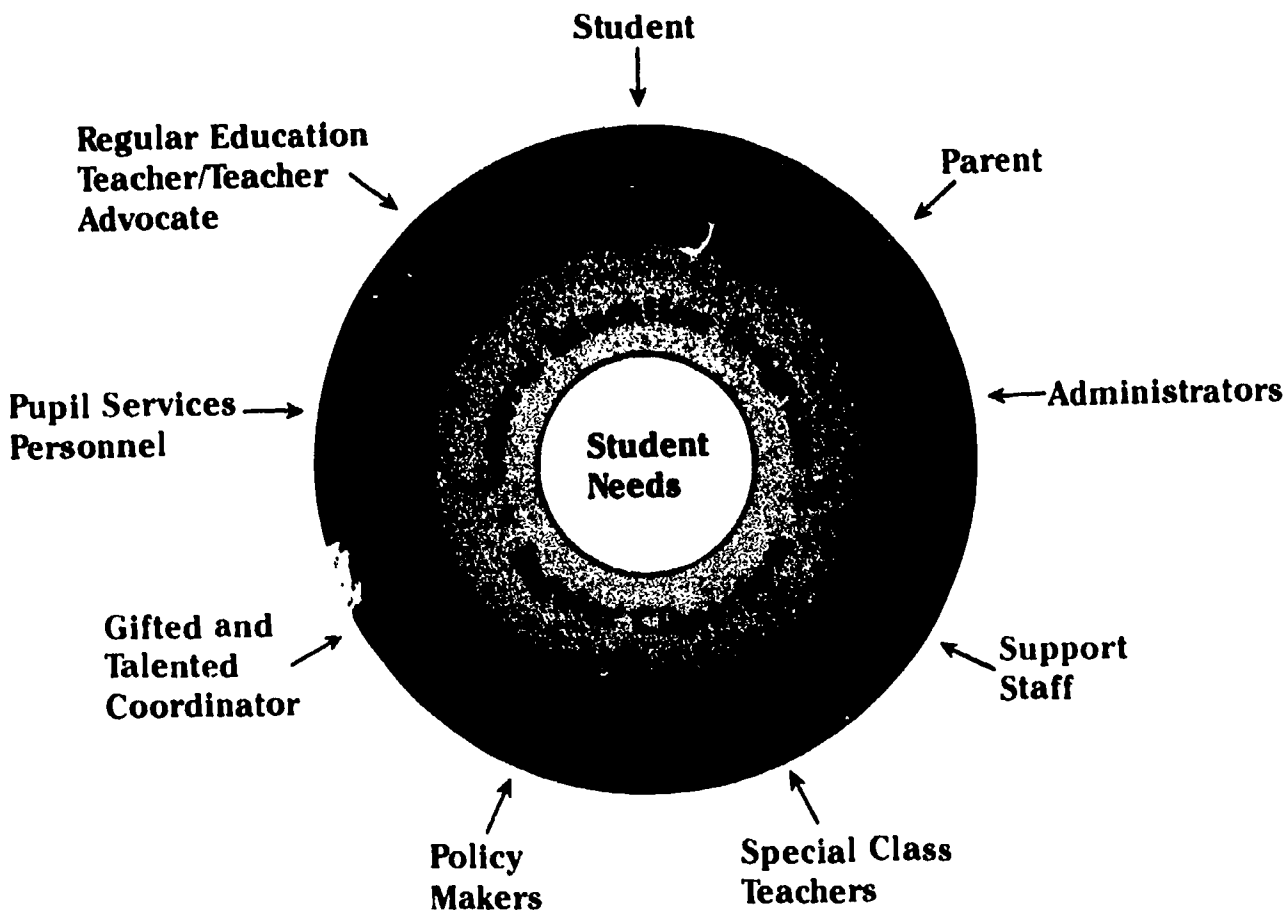
Some progress appears to have occurred in that a transition has been made from referring to *the* gifted and talented program, to *programs* for the gifted and talented (Cox, Daniel, & Boston, 1985; Kirk & Gallagher, 1983), to a continuum of services and programs *involving* the gifted and talented (The Association for Gifted, 1989). Thus, the entire education community has now been enfranchised in the quest to bring appropriate education to gifted and talented students. True collaboration is the next step to a full-service model of program delivery.

Collaborating with General Education Professionals

The potential areas for collaboration among professionals dealing with gifted and talented students are as many as the problems that these students and those responsible for their educational welfare face. Certainly, matters of student selection, program design, program placement, curriculum, evaluation, and personal well-being are a part of comprehensive collaborative planning and service delivery.

Perhaps the most essential element needed for collaboration to occur is the one that is most difficult to achieve. That is, everyone in the education community must see the need, accept responsibility, and pursue the goal of full service for gifted students. It is the fundamental responsibility of all educators to meet the individual needs of all students, including those who are gifted and talented. At the same time, those trained in educating gifted students must be willing to share responsibility and welcome the insight that their general education colleagues bring to the process. Mutual respect and determination can result in a mighty team with greater capability than any one member can contribute.

Figure 1
Full Service Model for Programs Involving Gifted and Talented Students



To begin the process, it is necessary to adopt a new concept of what full service for gifted and talented students means. In a full-service model, student needs are at the center of all educational decisions. This student-centered approach recognizes the distinguishing learning characteristics of gifted students (Parke, 1990) that drive their need for programs. Full service to this diverse population can be delivered only by developing a multiple-programming approach (Parke, 1989b; Cox, Daniel, & Boston, 1985) that matches programming options with individual student profiles. Decisions regarding program design for any one student are made by an interdisciplinary placement and review team consisting of educators, the student, and the parent or primary care giver. Each student's case is then coordinated by a teacher-advocate, most likely the homeroom teacher or gifted/talented coordinator.

For this type of model to work, collaboration must occur on an ongoing basis between the student and the teacher-advocate, the teacher-advocate and the parent, the teacher-advocate and other service personnel, and among members of the placement and review team. In this way, a flexible system responsive to individual student needs can emerge and ensure full and appropriate service.

Collaborating in the Student Selection Process

Successful selection of students to programs involving the gifted relies on wide-ranging acceptance of the need for such programs and agreement as to the populations to be served. This can best be accomplished through collaborative planning. If there is anywhere in the program development process that is ripe with issues and problems basic to collaboration, it is in determining what factors (i.e., student needs) merit a program.

A planning committee might consider the following questions:

- What needs do students display that make a program necessary?
- Which students are demonstrating the need for differentiated programs?
- How is the general education program failing to meet the needs of gifted and talented students?
- What additional program types are necessary to meet those needs?
- Are there underachieving gifted and talented students in the classroom?
- Are program options needed to address their underachievement?
- Are programs addressing the arts needed?
- How will students be selected for programs?
- Are measures other than norm-referenced tests acceptable?
- Who will make the final selections?
- Will students be involved in the process?

Such questions are at the core of the student selection and service delivery systems and must be handled with care. A collaborative team that represents different disciplines and grade levels, the administrative staff, other policy-making groups, parents, and students is more likely to develop the broad-based assessment procedures that lead to strong programs because such a team reflects the culture in which the programs must exist. Team members will raise important questions and concerns early in the planning process and will assist in building programs and developing procedures that will serve the students in a manner most fitting to their setting.

Collaborating in Program Design

Most programs for gifted and talented students focus on the academic areas of mathematics and language arts (Parke, 1989a). Granted, these are among the most vital aspects of curriculum, but students show exceptional abilities in many other areas as well. Full service requires building differentiation throughout the program offerings in a manner that takes into consideration the range and intensity of gifted students' needs and the learning characteristics that differ from those of their peers (i.e., the pace at which they learn, their drive to explore topics in depth, and their mature or unusual interests).

When developing the program options to be included in a differentiated system of instruction, a collaborative effort among colleagues allows for discussion of a broad range of content possibilities. It also opens up clear channels to determine what options are already in place systemwide. Student needs can then be matched to existing program options to determine what program development is required. It is rare that full-service programming is in place; it is also rare when no service possibilities exist. As student needs and district resources change, the collaborative planning process must continue because the program design phase of program development is never complete. Collaboration is the link to full service and full acceptance.

Collaborating in Program Placement

Once the assessment of needs has been completed and program design has begun in earnest, placement decisions for individual students can be made. Again, collaboration can help bring clarity to the important questions that arise during the placement process:

- Should students skip grades?
- Can a class that has low, but appropriate, enrollment operate?
- To what extent do gifted students need to be involved with others their own age?
- What if a student fails in the placement?
- What if a student does not wish to enroll in the program?
- Are student schedules too heavy?

Collaboration involving the student, parent, regular classroom teacher, teacher-advocate, gifted/talented coordinator, guidance counselor, special class teacher, administrator, and other appropriate parties can address these issues from many perspectives. Again, the likelihood for successful placement increases as the various points of view are brought to bear on the issues.

Collaborating in Curriculum Development

While collaboration is important in all facets of planning and delivering services to gifted students, it is especially critical in the area of curriculum development. As stated above, full service requires differentiated curriculum in general education curriculum as well as in special programs, including such frequently forgotten areas of study as vocational education, special education, and the arts. Collaboration is needed within and among departments, school buildings, and grade levels; among teachers and students; among the students themselves; and between the schools and special services and community agencies. Such collaboration opens up great possibilities for interdisciplinary study, appropriately-paced programs, challenging and stimulating content, in-depth study, community service projects, program and content articulation, mentorships, and peer coaching. The possibilities are endless.

Collaborative planning of curriculum helps to avoid turf battles over content, possessiveness of resources, lack of articulation, unimaginative course work, student passivity, and lock-step learning. These pitfalls torpedo programs for high-ability students on a regular basis. The topic of meeting individual student needs should be discussed in all schools regarding all students. It is at the core of professional responsibility.

Collaboration can also occur in the actual delivery of instruction. When grouping students for instruction, collaborative practice might see students teamed with teachers who are the most able and willing to provide the more complex, rigorous, appropriately paced, and creative lessons that the gifted find challenging. An instructional team concept may emerge in which teachers specialize in content areas and assist other team members in lesson planning and determining what is important for the students to know. Resources and expertise may be shared so that a flexibly paced, continuous progress curriculum can be a reality. Thus, students could have the opportunity to pursue their ideas on an in-depth basis and could use materials that are at their achievement levels.

Collaborating in Evaluation

Many important questions must be considered when evaluating the effectiveness of services to gifted and talented students:

- How will the success of services be defined?
- How can success be measured?
- What do students consider to be indicators of success in these programs?
- Should a comprehensive evaluation procedure be mounted?
- Who will conduct the evaluation activities?
- Is an outside evaluator needed?

The first question alone can engage an evaluation team for weeks! To assure that it is answered completely and accurately, data must be gathered from all parties who have pertinent information, such as program planners, policy makers, parents, and other constituencies who affect the program planning and maintenance decisions. Sound evaluation practice assures that information is derived from those who are closest to the source of the data being sought. It also assures that the evaluation plan takes into account the questions of all who have commissioned the study.

Many parties, therefore, must be involved in the evaluation process. It is unlikely that any one person can take on all evaluation tasks and complete a comprehensive, responsive study without the help of others. It would be foolish to do so. With the integration of programs for gifted and talented students into the general education structure, the wealth of direct information that general educators hold, and the health of programs depending on the activities of many people, it is essential that broad-based evaluations spring from broad-based committees representing the constituencies of the program and the constituencies of the evaluation. Collaboration cannot be ignored.

Collaborating for Student Well-Being

Gifted and talented students appear to be at risk in regular classroom settings when their unique learning and personal needs are not addressed (Parke, 1989b). Their well-being stems from nurturing, safe environments in which excellence is valued, individual differences are accepted, and learning is risk-free. Many gifted students also require support and strategies for developing and maintaining positive self-concepts as they sort through the challenges that face them throughout their lives. Such matters

as perfectionism, multipotentiality, asymmetrical growth, and meeting the expectations of others can derail even the seemingly most resourceful student.

Collaboration with support service personnel can help those planning and delivering instruction to gifted students in a manner that may be more conducive to development of their full potential. Counselors, psychologists, social workers, and others may wish to become directly involved in service delivery by providing seminars and group or individual guidance to gifted students and their classmates in an effort to make the classroom a place in which learning can flourish.

Implications of Collaboration

When taken to its logical conclusion, collaboration in the education community has implications that affect the entire system of instruction. When student needs become the primary basis for educational decision making, policies may need to be reviewed, curricular delivery systems reconceptualized, instructional materials reorganized, staffing patterns redesigned, and parent/student roles in instructional planning and delivery reestablished. True differentiation of service for the gifted and talented invariably results in differentiation of service for all students. Differentiation for all students cannot be delivered without systems that are responsive, flexible, and collaborative.

Collaboration brings together a convergence of talent likely to explode into new ideas, unique practices, and confederations of purpose. Thus, conventional practice that is not working may be challenged and new strategies offered in its place. Or, for practice that is working, a new commitment to its preservation may emerge. Regardless, a more vital, energetic system of instruction is bound to emerge. Teachers and students alike will see the meaning in what they are doing and feel a commitment to ensure its continuation.

The collaborative process enables people throughout a system to come together to jointly work on the problems and issues at hand. With gifted and talented programs being, in the large part, separate from general education, they have been subject to the changes in philosophy and funding that face all districts at one time or another. Collaborative planning and service delivery makes those programs far less vulnerable as they become the concern and responsibility of a greater number of people. The more programs involving gifted and talented students are institutionalized as part of the general array of program offerings, the less likely they are to become easy targets for monetary savings or ideological disagreement. The collaborative process, more than any other one factor, allows provisions for gifted and talented students to become part of the school district's full-service program model in which the needs of all students are seen as equally important.

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Local Administration of Programs for the Gifted and Talented

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Introduction

In 1981, a handful of educators got together to share experiences and ideas about designing programs for gifted students. They founded what is known as the Consortium of Ohio Coordinators for the Gifted (COCG), an organization of administrators of gifted programs. A decade later, COCG furnishes support and leadership for members representing city, local, and exempted village school districts in virtually every county of the state. The organization's mission is "to promote the professional growth of coordinators who facilitate appropriate education of gifted and talented children."

What is "appropriate education" for the gifted and talented? During the 10 years of COCG's existence, the definition of giftedness, the identification process, curricular guidelines, and program planning for gifted children have continued to evolve to help develop an answer to this question. These are just several of the issues that coordinators and administrators of programs for the gifted have addressed in their effort to facilitate appropriate education for gifted and talented children.

Administrators of programs for the gifted face additional challenges. They must deal with political and economic issues that affect programs for the gifted. They must help to define their role in the overall education program of the school district and help to fit services to the gifted and talented into the philosophy of the regular education program. They must be concerned about staff development, program image, and evaluation of program effectiveness. They must articulate the benefits that services for the gifted provide to all students.

Definition of Giftedness

A major issue that has direct implications for the regular school population is the definition of giftedness. Without a doubt, appropriate definition of the population of gifted students who will receive services should precede any identification process. Without having a clear understanding of what gifted means in a particular community, appropriate programming cannot occur.

A conscientious approach must be implemented to determine who indeed is gifted. Educators, particularly administrators, should recognize that giftedness is a relative term and that the majority of the student population will provide the definition by which gifted students will later be identified. While deviation IQ can be a legitimate means of identifying a small percentage of the gifted population, such a definition of giftedness may have no bearing on the programs in a particular school system.

It is possible that giftedness will be defined according to whom a particular school system considers to be the students for whom differentiated education is merited or can be provided. Obviously, once giftedness is defined, there is a change in the perception that other students and adults will have for those students identified as gifted. Therefore, great care must be used so that these gifted students are not needlessly labeled or segregated from the regular student population.

In the early 1980s, many districts with programs for the gifted focused on "pull-out" or resource room models as a way of meeting gifted students' needs. With these models, it was considered "appropriate" to focus on academically or intellectually gifted students and to give them thinking skills instruction and stimulation of creative thought to supplement what was occurring in regular classrooms.

In 1987, Ohio law required that the identification of gifted children shall include not only those students with cognitive and academic abilities but also those with creative thinking and visual and/or performing arts abilities. Statistics for 1991 showed that there were 220,963 identified gifted students in Ohio; this was approximately 12% of the total student population. Of those identified students, 137,843, or 62%, were not served by any special program or educational option. Additionally, many of those who were counted as served may have received a minimum of attention through only one program option.

The means by which educators undertake the identification of gifted students can have a significant impact on the regular classroom. The identification process will affect the way in which classrooms operate and the way teachers teach. As students are tested and determined to be gifted or have a particular talent, their presence in class may be positively or negatively perceived. Those perceptions may influence the way the teacher delivers instruction to students in that classroom.

Economic and Political Concerns

Providing services for the gifted and talented has economic repercussions. Two positions emerge. The first is that gifted education is a viable means of encouraging and assuring the survival of American society and, therefore, large amounts of money should be expended on it. The other position is that such funds should be devoted to programs for those less able in an effort to bring them into the mainstream. Given that the available funding is limited, both positions have important implications.

This economic concern leads to political issues. In the political arena, an important question must be answered: What role should education for the gifted play at the local, state, and national levels? Although American society has acknowledged the necessity for improved performance from its youth, particularly the most academically gifted and talented, adequate commitment to the appropriate education of these students has not been widely embraced.

Several state legislatures have mandated the creation of state schools patterned after the North Carolina School for Mathematics and Science. The U.S. Department of Education has endorsed the creation of 535 magnet schools to serve as models for national education improvement. As well-intentioned as these proposals may be, there remains little likelihood that they will result in improved education for most students. A much more productive solution would be for administrators of programs for the gifted to extend services for the gifted into the regular classroom, thereby benefiting greater numbers of students, including those who are gifted.

Another political issue pertains to the philosophy of the program for the gifted, which must be compatible to that of the regular education program. The educator who develops a program for gifted children must recognize that the theoretical underpinnings on which the program is to be built must fit reasonably well within the philosophy of the school district's regular education program. That is, the program for the gifted cannot be something that exists in isolation or that operates on a different level but must be linked to the general education program in the school system.

The socioeconomic status of students who typically are selected to participate in programs for the gifted creates public relations problems in many cases because students who are the recipients of services for the gifted often represent the more advantaged populations. Administrators of programs for the gifted must shift the focus from these advantaged students and find ways to identify and serve larger segments of the gifted student population, including those who are economically disadvantaged and others who are historically underserved.

It may be difficult to convince a community that specialized programs for a limited number of students merit the expenditure of the school district's capital. By also providing services to the gifted in the regular classroom setting, many other students will benefit. If a broader base of students receive curricular specialization or extension through such services, there will be increased appreciation of and support for these programs and more willingness to provide academic challenges beyond those that the district may currently offer.

In those school districts where services to the gifted are just being initiated, the gifted program administrator must take time to build a reasonable foundation and not attempt to operate programs that do not have the support of faculty, other administrators, parents, and the board of education. There must be better marketing to spread the gospel of the good things that programs for the gifted can do for all students. The administrator must help others realize that programs for the gifted are enhancing education for all students.

Curriculum Challenges

A major criticism of programs for the gifted is that they contain fragmented and disjointed curriculum. This is particularly evident in pull-out classes or resource rooms in which teachers are forbidden to introduce regular content for fear that students will accelerate through the regular curriculum. In such settings, meaningful lessons may be limited. Educators of the gifted are often advised to provide classes that in and of themselves lack substance. In these cases, program administrators must be advocates for teachers of the gifted so that meaningful content and appropriate services can be provided. The objective should be to ensure significant academic experiences that challenge gifted students to further develop their cognitive abilities. With the pressures of constantly changing technology and the need for repeated retraining of the work force, society can neither afford nor tolerate limiting the potential of any child.

Related to the criticism of disjointed curriculum is the charge that there is no systematic planning in programs for the gifted. This is often the result of programs that serve one content area in one grade and a totally different content area in the next grade because regular classroom teachers do not wish their "thunder to be stolen." In such cases, the regular classroom teacher imposes restrictions on programs for the gifted. If content in the gifted classroom cannot encroach on regular classroom work, administrators of programs for the gifted may find that programs have no scope and sequence and little, if any, articulation among grade levels or teachers.

Alternative Approaches to Serving the Gifted

Just how should appropriate services to all gifted and talented children who have been identified be provided? What is the approach to take? Should programs that are separate from regular education be expanded, or is it more "appropriate" to meet gifted students' needs in the regular classroom? The answer is as obvious today as it was in 1981 when COCG was established. Gifted children are best served by providing them with opportunities both outside and inside the regular classroom.

Grouping

For years, gifted programs have operated in isolation. These programs place gifted students into groups with their ability-level peers who leave the regular classroom to receive attention. The students, who often meet in small groups — whether by pull-out, add-on, or creative scheduling — receive important and vital services. Their giftedness is dealt with through units of study, special projects, and time spent together on a day-to-day or week-to-week basis, which facilitate challenging interaction of gifted students with their peers.

Special programs for gifted students at all levels must continue to be designed, implemented, and evaluated so that these students spend some time with their intellectual peers. These special programs for gifted students are important to the students' understanding of their educational and intellectual needs. In addition to presenting gifted students with challenging curriculum, special programs may introduce additional opportunities outside the school district and may serve as a link to universities, colleges, and other institutions and organizations that create evening, weekend, and summer experiences for gifted students.

Serving Gifted Students in the Regular Classroom

Special programs that group gifted children with others of similar ability are still needed. At the same time, however, services to the gifted need to be extended into the regular classroom for the benefit of both gifted and nongifted students. This is especially important today because American society has recognized the economic necessity of improving education for all of our children in an effort to reverse the downward spiral of American productivity. This twofold approach to providing an appropriate education both in and out of the regular classroom is the focus of gifted programming in Ohio today.

The preparation of new teachers and the retraining of existing teachers need to be improved so that all teachers can enhance the gifted student's entire school day. By training teachers to challenge gifted students and focus on the potential of each individual child, *all* students in the classroom are affected. In 1981, retraining of classroom teachers seemed too large a task to undertake; today it is an imperative one.

Increased emphasis on personnel preparation to help regular classroom teachers better understand and meet the needs of gifted children is of paramount importance. Gifted program administrators and special program teachers need to broaden their scope to include not only providing for gifted students but also offering assistance to regular classroom teachers.

Teaching Creative Thinking

Ohio's *Rule for School Foundation Units for Gifted Children,* adopted by the State Board of Education in 1984, stated that "appropriate education" for the gifted shall consist of at least five hours of instructional services per week, which includes higher-level thinking, critical thinking, divergent thinking, logical reasoning, creative problem solving, research methods, interpersonal relations, and oral and written expression. Gifted program administrators, with the help of COCG, clarified goals and objectives related to these curricular topics and included them in their programs in a clearer, more comprehensive fashion than before.

Critical thinking skills, those that deal with analysis and organization, are often quickly adopted and understood. Such skills — classifying, outlining, and identifying fact and opinion — are universally taught. However, *creative* thinking skills, those that deal with perception and reasoning, are less universally accepted and practiced. Gifted program teachers regularly teach creative thinking skills to their gifted and talented students, but regular

classroom teachers generally do not teach creative thinking skills in their classrooms.

Open-ended and higher-level questioning strategies often generate responses that are unique, inherently elusive, and difficult and time-consuming to evaluate. Open-ended questions often result in divergent student responses that take the class in a direction that is very different from lesson goals and objectives. Creative thinking is not easily guided into channels with which many traditional classroom teachers feel comfortable, especially in an age of accountability.

Despite the fact that creative skills can be developed, teachers often fail to include lessons on creative problem solving or lessons designed to increase fluency, flexibility of thought, and the abilities to imagine and to be inventive. Indeed, creative thinking is sometimes interpreted as an artistic quality rather than an inventive process. Without sufficient training in the teaching of creative thinking skills, many teachers lack confidence in teaching these skills and thus avoid teaching them at all.

Regular classroom teachers need to learn more about higher-level questioning skills so that they can effectively teach these skills. Gifted program personnel can assist regular classroom teachers by giving them a clearer understanding of thinking skills instruction and how it can be integrated into the curriculum. Administrators of gifted programs should provide a safe environment for teachers to use higher-level questioning as a means of creating better thinkers in the classroom. They should encourage classroom teachers to include more of the difficult-to-evaluate creative thinking skills into their lessons and demonstrate methods for assessing students' application and use of these skills. More students will then be better prepared to analyze and solve problems.

Compacting

Gifted program administrators must equip classroom teachers with the skills they need to focus on all students as individuals, including those who are cognitively, academically, or creatively superior. The concept of assessing what a student already knows in order to eliminate reteaching should become more widely appreciated. The student who has mastered skills that are to be taught to the class as a whole or the student who needs less practice to master new skills is ripe for differentiation through the use of the technique of compacting.

Compacting refers to assessing a student's understanding of curriculum prior to its introduction in the regular classroom, eliminating content that the student already knows, and providing the student with alternative content to enrich or to accelerate. It includes skipping exercises and reducing whole units of study into a few days. This leaves time for individualized projects that can enrich or expand the student's knowledge. Although not a new strategy, compacting is not often employed by teachers because they generally feel compelled to document each step of skill mastery.

Compacting is one tool that teachers may use to alter, or differentiate, the curriculum for gifted students. Another tool to accomplish differentiation is to enlist the students in the process. Teachers should be encouraged to use student interests to plan projects that provide in-depth learning experiences. Gifted students can be encouraged to communicate with their classroom teachers to modify curriculum to meet their specific needs. Collaboration among gifted students, special program teachers, gifted program administrators, and regular classroom teachers can further enhance differentiation of instruction.

Other Administrative Concerns

Staff Development

References to teacher training and retraining have already been made in this chapter. To ensure success, administrators of programs for the gifted must see that proper staff development occurs. The program administrator should attempt to provide continuing education to regular classroom teachers to encourage them to address the needs of gifted students in their classes and in all subject areas as well as to ensure the most complete and comprehensive education for all students.

Gifted program administrators should help both the teacher of the gifted and the regular classroom teacher to understand program goals. Teachers need to recognize their respective roles in the education of students who may be in either teacher's classes at some point in time. To be most effective, teachers of the gifted should not be isolated from the other teachers but should be perceived as significant members of the school staff, making measurable contributions to the productivity of the entire school program and not only to the finite number of students whom they may see only on a limited basis.

Administrators of programs for the gifted can ingratiate themselves with other staff members and produce potential allies by judiciously sharing ideas for modification of classroom instruction. Systematic exchange with the entire teaching staff can contribute to the integration of appropriate components of programs for the gifted into other programs in the district.

Program Image

Tied to economic concerns is the issue of program image. Too frequently, programs for the gifted are viewed as unnecessary frills or programs that take money from regular education. Educators of the gifted must readily retort to the charge that programs for gifted children are frivolous. They must be able to respond with meaningful educational explanations for the novel educational endeavors that teachers introduce into these programs.

To illustrate this point, programs for the gifted often integrate field trips into the curriculum. In and of themselves, field trips may be very beneficial educational experiences that can extend or enrich classroom instruction. This especially is true for academically talented children who see greater implications for many of the educational trips in which they participate. However, educators of the gifted may greatly undermine their programs by arranging frivolous or disjointed field trips that serve only as entertainment or diversion for the students and have no direct correlation to the curriculum.

For example, a trip to a museum that is culminated by lunch at a fast-food restaurant will quite possibly be remembered for the lunch and not for the trip's educational contributions. As returning students trumpet their final stop, disgruntled teachers and regular students may view the program as one for the gastronomically gifted and not for the academically talented. Certainly, this is a disservice to educators who planned a meaningful extension to the curriculum but unfortunately allowed lunch to become the topic of conversation from their returning students. The program administrator might suggest a brown bag lunch as an alternative that would increase the probability that museum artifacts or displays come to mind when students encounter queries about the day.

Evaluation of Programs for the Gifted

Programs for the gifted often lack appropriate goals and objectives. This is often the result of not allowing instruction to be a meaningful part of or supplement to regular classroom instruction. Goals become rather esoteric and have no real meaning in the lives of most children. All too frequently, ill-defined goals and objectives lead to weak evaluations that do not reflect the meaningful instruction that has taken place in the classroom. Whether comparison groups, control groups, or systematic research designs are used to evaluate instruction, ways to evaluate programs for the gifted must be developed to show that these programs have substance and contribute to regular education as well as to the education of gifted students.

Counseling for Gifted Students

A major difficulty that administrators of programs for the gifted must confront is the lack of counseling for academically talented students. A combination of the students' giftedness and their treatment in the regular classroom often creates difficulties for students at the elementary and secondary levels. Because regular classroom educators may not respond to the needs or the learning styles of these students, serious adjustment problems can result. Administrators of programs for the gifted need to be resourceful by collaborating with counselors and school psychologists to find effective ways to help gifted students overcome the difficulties they experience.

Impact of Programs for the Gifted

Partly out of the necessity to provide differentiated teaching strategies and partly due to the talents of the particular educators, programs for the gifted often evidence trends in education long before the regular classroom teacher becomes aware of them. Whether it is the result of the creativity or curiosity of educators of the gifted or the networking to which they belong, programs for the gifted have often been the proving grounds for what becomes mainstream education. Bloom's Taxonomy, the teaching of critical and creative thinking skills, Philosophy for Children, Odyssey of the Mind, and the Future Problem Solving Program are the kinds of educational innovations that at one point were components of the programs for the gifted but gradually became incorporated into regular classroom instruction.

Ideally, programs for the gifted are always in flux. Once instruction, content, or methodology has been developed and proven to work for academically talented children, the administrator should work toward integrating that aspect of the gifted program into the regular classroom. In other words, the program for the gifted may be used as a laboratory or a training ground for instruction or content or methodology that can later be employed on a much broader scale. In such a way, administrators and teachers of the gifted serve their clientele directly but also extend their influence to the entire student population. When larger numbers of students profit from the opportunities provided to the gifted and talented, a broader base of support is generated.

In most cases, regular classroom instruction is adequate because of the nature of the populace within a school system. In other situations there is an obvious discrepancy between what teachers are doing and what they could do. In such cases, then, the administrator of programs for the gifted can serve as a change agent to attempt to lead the district into more productive use of its resources and more profitable education for its children.

To better serve all students, administrators of programs for the gifted must continue to market and maintain programs and services for the gifted in a

meaningful fashion. To accomplish this, they must become collaborators with other educators to gain their support. They must help regular classroom teachers and general educators see value in programs for the gifted and recognize that these programs are not designed to compete with the regular education program for recognition nor are they designed to upstage the regular classroom teacher who must deal with students of all ability levels instead of the select population in programs for the gifted.

An attractive option to some school districts is to adopt programs that are successful in neighboring districts or programs that have set a national example. It is not wise to implement what another district has done unless it can be ascertained that the philosophies, students, and direction are similar in both districts. Unquestionably, there is no one best program for the gifted and talented because what is gifted in one community is not necessarily gifted in another. To be effective, any program must serve the needs of the students in that particular school system.

Conclusion

The role of today's administrator of the program for the gifted is a challenging one, which includes providing classroom teachers with the tools they need to individualize instruction for students whose current mastery of content requires that alternative strategies be employed. If all students are to reach their full potential, it is essential that the regular classroom teacher and the special program teacher work together. Appropriate personnel preparation and insightful administration of services for the gifted will accomplish the desired goal of providing "appropriate education" for those students who have the ability to excel and will simultaneously improve the quality of education for all students.

Classroom Strategies for Meeting Multiple Needs: A Five-Step Model

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Introduction

When most individuals, educators included, consider ways to meet the needs of gifted children, they often think of special programs or classes in which gifted students are grouped homogeneously. Only upon reflection do educators look to the regular classroom as a source of appropriate programming for highly able youngsters. Yet it is in the thousands of elementary and secondary classrooms across the nation that most gifted students spend the majority of their school careers. Thus, it is vital that *all* educators learn to implement classroom strategies that benefit the most talented students they teach.

It has been traditional for gifted education specialists and regular classroom teachers to exist in separate worlds, despite the fact that they often share common students. The walls between regular classrooms and gifted programs are quite distinct and little, if anything, has been accomplished to diminish this gap. Gifted labels have been attached too securely to instructional practices such as simulations and independent study.

It is now time to break down the walls that force gifted students to make distinctions between classroom requirements and gifted options. The field of gifted education has much to share, and regular classrooms have much to offer. Active and constructive partnerships between gifted program teachers and regular classroom teachers would strengthen the total educational program for gifted students while simultaneously offering sophisticated and enhanced learning opportunities to all students.

Gifted education specialists must take the lead and share practices common to their field with regular classroom teachers. However, before educators of the gifted begin to inform their regular education counterparts of the benefits of such practices as Bloom's Taxonomy and Creative Problem Solving, they must judiciously avoid the common misconception that regular classroom teachers are ignorant of these "higher-level" strategies. To assume that teachers need to be taught certain skills implies that they do not use them already.

In most cases, however, yesterday's enrichment has become today's standard curriculum, and the professionals who implement such curriculum must be recognized for their efforts in delivering instruction that is appropriate to individual students' learning rates and styles. Only when gifted education specialists and classroom teachers perceive themselves as partners do the most highly able students achieve the personal and academic success commensurate with their talents.

So many children, so little time! Gifted students are not the only group of students whose abilities require modification of existing curricula. As every classroom teacher knows, the range of abilities in most classrooms covers the broadest possible spectrum. Thus, while it would be appropriate in this chapter to focus on ways to modify the curriculum and instruction specifically for identified gifted students, such a tactic would ignore the reality of heterogeneity that exists in most classrooms. In addition, it would also ignore the fact that identification procedures are not without their limitations. These numbers games, more often than not, dismiss some

very talented students whose abilities also warrant some specialized curriculum modifications.

This chapter focuses on a model that takes into account the "mixed-ability reality" that most teachers encounter. This model also makes several assumptions:

- Teachers are competent.
- Attitudinal shifts often must precede instructional changes.
- No single learning activity or curriculum change will satisfy the needs of gifted students; rather a comprehensive and well-articulated program is required.
- Nothing worthwhile is achieved without effort.

Five-Step Model for Enhanced Learning

The five-step model for enhanced learning, developed by Deborah S. Delisle, incorporates practices long regarded as staples in the field of gifted education directly into regular classrooms. By doing so, the model seeks to eliminate the fragmentation often found in overall programming for gifted students. More often than not, only a few grade levels are included in a gifted program, and the daily lives of highly able students in regular classrooms are overlooked. Perhaps one of the most rewarding outcomes of this model is that the implementation of valuable and effective practices initially intended for gifted students raises the standard of the classroom program, thereby impacting *all* students.

The model consists of five steps: acceptance, classroom climate, knowledge of content and objectives, learning activities, and evaluation (see Figure 1). Movement from one step to the next implies both an acceptance and practice of the key elements. The steps decrease in height because as changes are made, it becomes somewhat easier to accept new ideas and incorporate changes in instructional practices. Every step has three distinct components, each of which contributes to the strength of that particular step.

Acceptance

An awareness that change can be healthy and constructive allows an educator to take the first step: **acceptance.** In the past, educators in the field of gifted education have attempted to make too many changes at once in classrooms. Worse yet are those situations in which finger pointing at the inadequacies of regular curriculum have not been followed by significant and constructive plans for change. As a result, change has not always been as rapid or as productive as anticipated. Regular classrooms had then been evaluated as being unable to meet the needs of gifted children. Thus, it is imperative to recognize that there is simply no quick, efficient method for making every classroom more effective. Initiatives requiring change in philosophies and practices must initially be *small* and *sound* in order to be *successful.*

Classroom teachers recognize that the *learning patterns, styles,* and *rates* of all children vary greatly, even within self-contained classes of gifted students. As new curriculum is written, learning activities must translate this recognition into everyday practice. Additionally, enhanced learning will only occur if attention is focused on the *cans* as opposed to the *can'ts.*

A former colleague often complained about all of the activities that couldn't be accomplished in the classroom because there were too many students, 31 in number, in the class. Seven years later, this teacher had 20 students and a part-time aide but still complained about not being able to accomplish various tasks. Just what parameters would have satisfied this

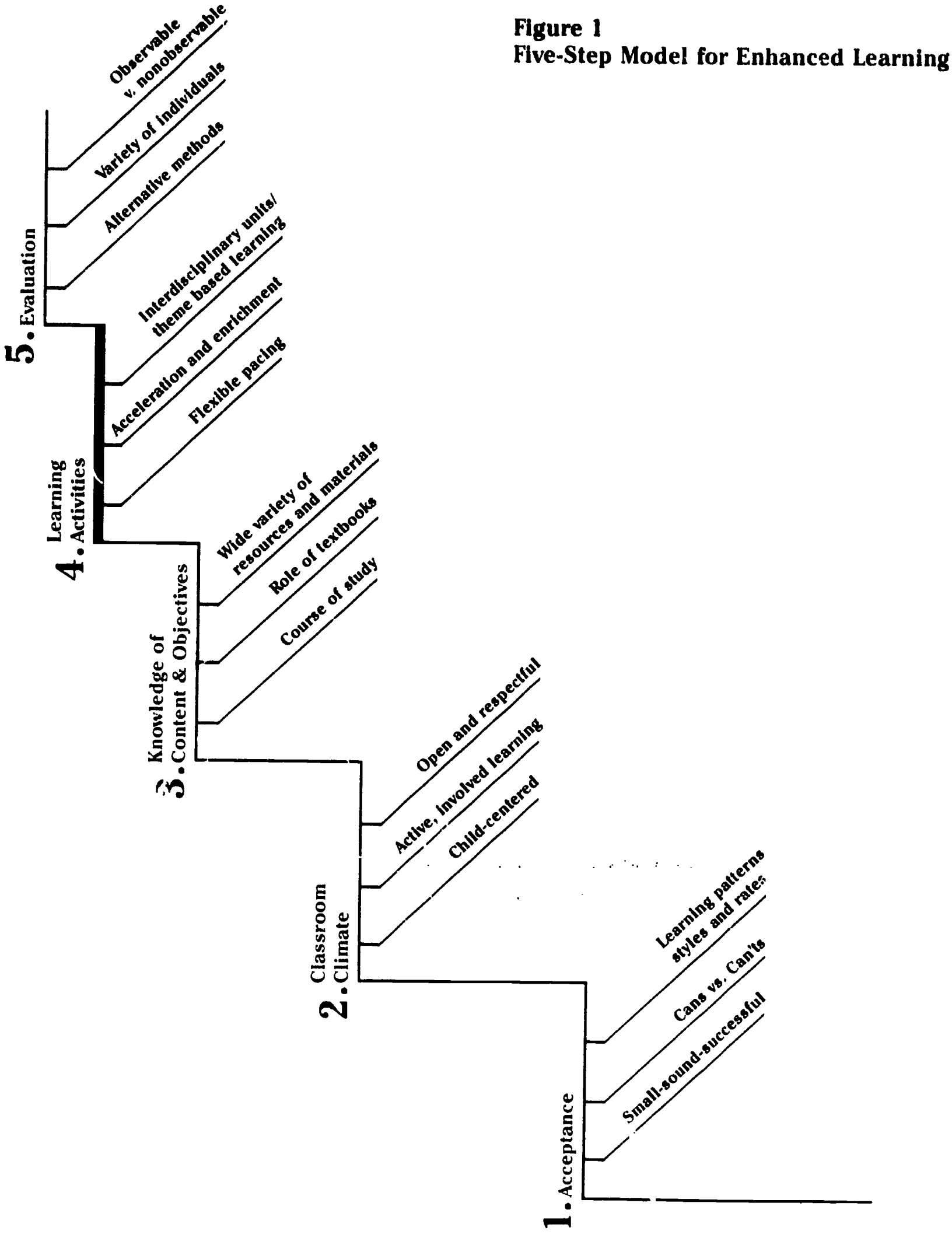


Figure 1
Five-Step Model for Enhanced Learning

teacher? The reality of education today is that there will never be enough time, money, or resources to satisfy everyone's agenda. It is imperative, therefore, to decide what can be accomplished and then establish a sequence of activities designed to achieve those outcomes.

Classroom Climate

An openness to critically analyze what actually occurs in the classroom will allow progression to the second step: **classroom climate.** Inherent in this step is a conscious respect for individual children's strengths. *Child-centered* classrooms place children first and subjects second, even at the secondary level. Such environments welcome gifted students. Practices in these climates tend to be flexible and shy away from molding students to a predetermined set of guidelines and expectations.

When a child-centered teacher asks the class to tell what they already know about a topic they are just approaching, arms are opened wide as the teacher says, "I respect what you bring into my classroom." When the teacher next asks the students what they want to discover about this topic, a pat is given on the back to each of them that says, "I value your interests." Teachers who give such messages to students inspire students to learn; they demonstrate support for thinking and pursuing knowledge. Students would benefit greatly if each teacher did some annual "spring cleaning," questioned old habits, and cleaned out the cobwebs of long-adopted practices.

A spirit of inquiry prevails in classrooms when learning is viewed as an *active* process. *Why* becomes the most important word as hands-on activities actively engage curious minds. Long considered a staple of gifted programs, simulations, for example, can be incorporated into regular classrooms. Simulations permit the required curriculum to become infused with appropriate enrichment materials. A simulation such as "Mummy's Message" would enhance a study of ancient Egypt while offering heightened interest for students. Such provisions as this give all students, including gifted students, many opportunities to explore and delve more deeply into content.

Knowledge of Content and Objectives

A willingness on the part of classroom teachers to explore new avenues of instruction serves as the catalyst for placement in the third step: **knowledge of content and objectives.** One of the loudest cries often heard is that regular classroom teachers are burdened by their responsibility for covering the *course of study.* However, the course of study should not be viewed as a hindrance, but rather as a constructive teaching tool from which the teacher can create dynamic lessons. By molding the course of study to specific content, teachers can meet the needs of even the most able students.

For example, a fourth grade course of study might indicate that students are to "identify how a volcano erupts." The teacher can incorporate this objective into a challenging question for the gifted students: "Can a volcano be suppressed?" Such a question does not require a tremendous amount of additional planning on the part of the teacher, yet it yields a challenge to highly capable students. By tackling such a question, the gifted students will have satisfied the required objective (they would have to know how a volcano erupts in order to determine whether or not it can be suppressed), while also being exposed to the topic on a much more in-depth basis than the remainder of the class.

Further scrutiny of the course of study will demonstrate that skills can be integrated across content areas. Thus, when a gifted student has demonstrated a keen interest in science, reading skills can be covered simultaneously as the student researches scientific journals and periodicals about

recent discoveries in genetic engineering. Such deviations within lesson plans serve to stimulate other students in the classroom as they are exposed to various aspects of topics. Sharing among students becomes commonplace, and lessons are not segmented between the resource room and the classroom. Everyone wins!

While on this step, it is necessary to critically examine the role of *textbooks* in the classroom. As teachers evaluate available textbooks, it becomes quite evident that these books must be used only, if at all, as springboards for learning. The textbook is merely a tool and, like any other tool, its use should be limited rather than extensive. Perhaps more than any other educational material, textbooks cause the greatest source of frustration for gifted students. Continuous repetition and isolated skills can extinguish the thirst for new knowledge. If the text becomes *the* curriculum and is taught page-by page, day-by-day, it takes on a life of its own. As a springboard, however, it can open doors for students to pursue topics more extensively through the use of supplemental and current materials.

If gifted students are to benefit fully and richly from their learning environments, classroom teachers must incorporate *a wide variety of resources and materials* into their lessons. It is important to remember that some of the best resources might be just around the corner. For example, a senior citizens center might provide an array of mentors for students interested in World War II, or a local high school teacher might be willing to explore the theory of relativity with an eager fifth grader. Catalogs, current event stories, walking field trips, games, newspapers, peer teachers, sample copies of books, simulations, television programs, children's picture books, administrators, and parents are yet more examples of available and inexpensive resources. Such activities and resources can blend very well into the regular classroom curriculum while also providing enrichment opportunities for students. These avenues of learning must be explored in order to challenge and motivate highly able students.

Learning Activities

An initiative to truly incorporate meaningful and relevant learning into the classroom leads to the fourth step: **learning activities.** Using *flexible pacing,* teachers allow students to progress rapidly in those subject areas in which they have demonstrated proficiency. Thus, instructional groups within a classroom are not stagnant but are fluid as they respond to the strengths, interests, and talents of the students. Grouping and regrouping become second nature as teachers cluster students depending upon their proficiency in various content areas. Students progress through skills and content as mastery is achieved. When using flexible pacing, the required curriculum can be streamlined, or compacted, to enable the gifted student to pursue areas of interest in-depth, conduct independent study, or work with a mentor.

Flexible pacing incorporates both *acceleration* and *enrichment,* two educationally sound practices that can serve useful roles within a classroom. Acceleration will challenge students to pursue content at higher levels more rapidly than their classmates. Enrichment will broaden students' perspective and expand their understanding of the world around them. Successful incorporation of enrichment in the classroom requires careful planning, of course, and goals must be clearly delineated. If logic problems are inserted into a Friday afternoon class for the sake of filling a 15-minute gap, enrichment has not taken place. Instead, teachers need to recognize the difference between these "fillers" and those activities that are clearly connected to content being studied.

By developing questions consciously designed to stretch minds, teachers can increase the likelihood that the needs of gifted students will be met in the regular classroom. For example, "What if the Civil War had never been fought?" is the type of question that can send students into an in-depth scrutiny of our nation's history. In the process, students will not only gain basic required facts and meet the objectives of the course of study, but they will begin also to sense history beyond a mere collection of dates and wars. The Civil War, thus reviewed, becomes known for the moral, social, and intellectual context of its era rather than it being a set of battles, generals, dates, and casualties to be memorized.

Interdisciplinary units can provide a flexible framework in which gifted students make viable connections across themes and disciplines. Outside of the confines of a school building, it is readily apparent that real life is just not neatly segmented into compartments like the schedules traditionally followed at schools. On Saturday, mathematics does not begin at 9:00 A.M. nor does the nightly news isolate the world's events into specific content areas. If children are to be prepared for the world-at-large, curricula must be designed to articulate connections across themes and contents. For example, "The Concept of Culture" is a theme that enables students to examine such topics as the family, assignment of roles, courtship and marriage, educational patterns, religious constructs, and art. As the students engage in research, their discoveries force them to weave ideas and facts through various disciplines while making viable connections across eras of history. The curriculum is strengthened by a thoughtful, comprehensive mosaic of learning activities.

Satisfaction with changes in learning activities often leads to changes in **evaluation,** the last step of the model. This is perhaps the easiest step because changes in learning activities naturally invite *alternative methods* of evaluating student performance. Portfolios, videotapes, narratives, debates, checklists, student contracts, and rating scales can often yield important information about students, as opposed to letter grades that provide little concrete information. "What was particularly informative about my speech?" "Which vocabulary words strengthened my ideas?" "What argument was most supportive of my research?" None of these questions is answered by a letter grade. Evaluation must provide the feedback required for students themselves to be able to determine their own growth.

Just as the scope of the learning environment must expand to include sophisticated topics and learning activities, so too the evaluation of student performance must be expanded to include *individuals other than the classroom teacher.* As topics become more specialized, students need to receive feedback from individuals who have expertise in that specialty. Once again, the imagination of teachers will expand the scope of available people to help in the evaluation process.

A fifth grader who has recently completed a study on the theory of relativity may not have local access to an expert in the field of physics. However, a little ingenuity can lead to a wonderful source of inspiration for this budding scientist. Following an initial phone call by the teacher, the student could mail a copy of a research project, along with an audio cassette tape, to a university professor. The tape might include the student's thoughts, questions, or ideas. The professor would then respond on the cassette tape and critique the student's work. This process would not only serve as an additional means of evaluation but also would provide a valuable mentor to a curious mind.

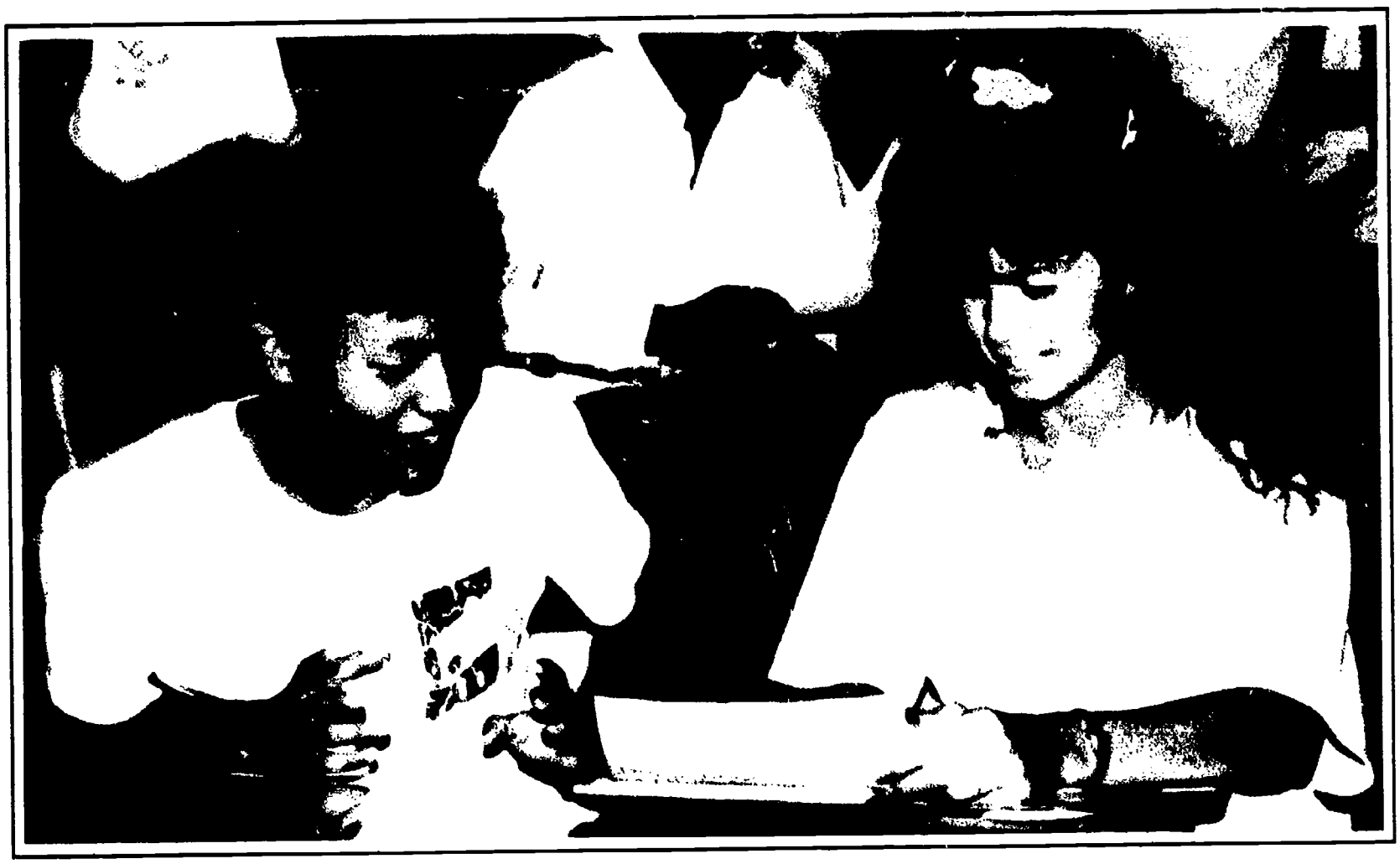
Some of the most critical elements of the learning process cannot be easily evaluated because they exist in the *nonobservable domain*. Nonetheless, they must not be separated from the evaluation process. A question such as "What did you learn about yourself as a result of this study?" allows students to reflect on their own growth. Comments such as "I learned that I can stick with one project for a very long time," "I learned to appreciate my talents as a writer," or "I realized that I can be too bossy in a group" all reflect critical, albeit unobservable, lessons of life. More important, perhaps, than the facts that students learn are these self-analyses that contribute to the overall development of our students. As such, it is very important that every teacher take the time to ask questions that prompt students to reflect on the personal components of learning.

Conclusion

Some people believe that the easiest job in education is teaching gifted students. They believe that because these students are so smart, they will probably just "learn on their own." But most gifted students, as well-versed as they might be about a specific body of knowledge that interests them, still need the guidance of skilled teachers who understand how to develop their creative energies. Doing this, and doing it well, is a job not for the faint-at-heart; it requires stamina, ingenuity, and a willingness to take that extra step. Teachers must often become learners and also strive to remain visionaries despite the overwhelming responsibilities of daily classroom life.

The five-step model outlined in this chapter provides a flexible framework for educators who wish to incorporate gifted education strategies, materials, and philosophies into regular classrooms. Successfully integrated with basic curriculum, the elements of this model will help assure that gifted students' minds are challenged throughout the school day and the school year.

On a broader scale, programs for gifted students will become more expansive as classroom teachers become active participants in the education of gifted students. Given this model and its implications for the regular classroom, gifted education can indeed have a rippling effect on all children. Lastly, if a primary goal is educational excellence on a massive scale, educators must look deeply into the eyes of restructuring and become advocates for the appropriate education of *all* children.



Residential, Regional, and Specialized Schools

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Introduction

> *If we do what we know and feel is right, it is bound to happen that among our graduates there will be those few who significantly influence life on our planet. Our philosophy is to treat our charges as if each one is capable of this extraordinary achievement* (Rigsby, 1988, p. 5).

This philosophy of the Illinois Mathematics and Science Academy (IMSA) is entirely consistent with the fourth of the six educational goals President George Bush, in collaboration with the National Governors' Association, outlined in his State of the Union message for 1990: By the year 2000, "American students must rank first in the world in achievement in mathematics and science" (Halprin, 1991, p. 207).

Residential, regional, and specialized schools can serve as the beacon for excellence in science and mathematics education for every state in the nation. Such schools offer exceptional opportunities for students, and they also offer unusually stimulating laboratories for training teachers, administrators, counselors, and curriculum consultants. The settings offer applied experiences in integrating content, instruction, and learner responses in the arts, the sciences, and mathematics at all levels of the educational continuum.

Residential Schools

The residential school concept is not new. In colonial times, students wishing a secondary education most often had to leave home and reside with friends or relatives or live on the campus of the school (Good, 1964). Nor is the residential school concept new to gifted education. There are at least two types of public-supported residential schools, the academic year schools and summer programs.

Three states — Illinois, Louisiana, and North Carolina — reported having year-long residential schools in the arts, the sciences, and mathematics (Hamant, 1988). The first of these schools was the North Carolina School of Science and Mathematics (NCSSM). This school, which opened in 1980, has served as the model for many of the other statewide schools (Rigsby, 1988).

The schools offer some very special and unique opportunities for the student body. They "create 24-hour-a-day living and learning environments. Students have access to labs, computers, classrooms, libraries, and teachers many hours beyond the usual school day" (Rigsby, 1988, p. 1). The students share formal and informal learning opportunities through association with individuals of similar abilities. An important part of their experiences includes living and socializing with others who share their abilities and concerns. Careful attention must be given to the social and maturational age of the students. Because the students are younger than average college students, the use of specially prepared counselors and residential staff is mandatory.

Regional Schools

A common regional school format is the "Governor's School" program (Stewart, 1988). Students are selected to attend a program — often on a college or university campus — for a period of time, usually from one to six weeks in length. The topics are varied. The arts and sciences are among the most frequent areas of study, but creative writing, music, visual arts, and dance are also found among the offerings (Swassing & Fichter, 1991). Summer residential opportunities have been offered to the gifted under the concept of "Governor's Schools" since 1963. Twenty-eight states offered summer residential options in 1989 (Swassing & Fichter, 1991).

Specialized Secondary Schools

The National Consortium for Specialized Secondary Schools of Mathematics, Science and Technology (NCSSSMST), established in 1988, is an organization of schools that specializes in mathematics and science. The membership, which includes both residential and regional day schools, has 29 institutional members in 15 states. While a majority of the schools were founded after 1975, the Bronx High School was founded in 1938 (NCSSSMST, 1991).

Specialized schools offer unique opportunities for students at the local level. They may live at home and attend a school where their special needs are addressed. In most instances, the tuition is born by the school district or offering agency. This makes it possible for students "at risk" economically and socially to gain the kind of education that is commensurate with their abilities.

Outcomes and Benefits

The anticipated outcomes of these programs are similar to the goals of the North Carolina School of Science and Mathematics, which are "to encourage more students to pursue scientific careers, gather some of the brightest students in the state, give them exceptional facilities and equipment, and hire a talented faculty to teach and encourage them" (Rigsby, 1988, p. 1). The Illinois Mathematics and Sciences Academy lists clearly stated student learner outcomes:

- Demonstrate an appreciation of aesthetics, based upon observation and perceptions
- Demonstrate the joy and excitement of life-long learning
- Formulate questions and seek answers through the observation and interpretation of phenomena
- Communicate effectively through the written and spoken word
- Solve problems and think critically in all areas of learning by analyzing, evaluating, and integrating data
- Think creatively and innovatively
- Demonstrate the use of intuition and imagination in the generation and solution of problems
- Demonstrate research and investigative skills
- Demonstrate the academic and technical knowledge needed to fulfil civic responsibility, improve the students' own health and life, and cope with an increasingly technologically complex world
- Judge the value and relevance of information (data) in presenting conclusions
- Demonstrate a core base of knowledge and skills in all areas of learning
- Demonstrate a healthy and positive self-concept
- Demonstrate a sense of social awareness and responsibility
- Make decisions within a moral and ethical context (Undercoiler, 1988).

What do the states get in return for spending such significant resources on relatively few students? Most schools are committed to serving as a resource for other schools in their state and as centers of educational innovation. For example, the Louisiana schools implemented a pilot telecommunications project to share their resources. Advanced course work in differential calculus was made available to selected public schools in the state, and teachers were invited to attend workshops held in conjunction with some of the programs. In North Carolina, more than 5,000 teachers have attended summer workshops at the state's School of Science and Mathematics.

The students' achievements also testify to the wisdom of such an investment of resources. For each of the last four years, the North Carolina School of Science and Mathematics has had more National Merit Scholarship semifinalists than any other high school in the nation. In addition, millions of dollars of scholarships have been awarded to graduates of state residential schools to attend some of the finest colleges and universities. It is evident that the schools are successful when one notes that three additional states — South Carolina, Mississippi, and Texas — opened residential schools in 1988.

Further evidence of success is clear in North Carolina. A survey of 1,444 alumni yielded 900 responses. Ninety-nine percent of the alumni reported attending four-year colleges, a figure twice the North Carolina average of 39%. Sixty-five percent of these alumni are still in college. It is also noteworthy that 74% of all male alumni, 61% of female alumnae, and 70% of Blacks, Hispanics, and Native Americans reported majoring in science, mathematics, and technology. These data are remarkable when compared to national data for the top 10% of scorers on the Scholastic Aptitude Test, which show that 40% of males, 26% of females, and 29% of Blacks, Hispanics, and Native Americans reported majoring in science, mathematics, and technology (Haagen, 1991).

Skeptics often doubt that graduates of residential schools will stay in the state. They voice concern that few students would use the education paid for by the state's taxpayers to benefit that state. The survey clearly silenced the skeptics with its report that two out of three graduates of the North Carolina School of Science and Mathematics chose to attend a college or university in North Carolina. It is also evident that the program is paying off for the state when more than half of the respondents reported that they are employed full-time in North Carolina.

Regional, residential, and specialized schools have special opportunities to search out and apply for funds from scientific and technologically oriented funding sources, including businesses and research foundations. Funding, however, is not the only positive outcome of linking with business and industry. These same agencies offer outstanding opportunities for mentorships, special lectureships, and tutorial experiences. When paired with learners, the professionals offer outstanding role models; they help the students learn the affective as well as the intellectual aspects of their career choices. Role modeling is particularly important if more young women are to be brought into the scientific community. Additionally, this personal involvement can only strengthen business and industry's partnership with education.

The Future

Other states that do not have residential schools at this time are moving in this direction. Several states have recently passed enabling legislation or are studying the concept. Ohio, for example, has operated Ohio's Martin W. Essex School for the Gifted since 1976 (Swassing & Fichter, 1991). The Essex School is a one-week summer program for 60 students selected from the state's high schools. The participants are about to enter their senior year in high school. The theme of the program, "Investing In Futures," focuses on the possibilities of matching the students' abilities and talents with the challenges and opportunities of the future.

Since 1986, Ohio has operated the Summer Institute program on 16 college and university campuses across the state. This program offers up to three weeks of specialized opportunities for up to 250 students in each of the institutes. In looking toward the 21st Century, Ohio has included convening a planning commission to develop recommendations for establishing a residential school as part of its strategic plan for the 1990s (Ohio Department of Education, 1991).

Many of the schools are funded by the state or other means and are free to the students. Selection to such schools means that the students are highly capable of benefiting from the curriculum. It is anticipated that the graduates will continue their education and enter a career in the sciences and/or mathematics. The Illinois Mathematics and Science Academy philosophy, quoted above, clearly expressed the attention to excellence and the resultant social value of residential and specialized schools.

There are many concerns about establishing residential, regional, and specialized schools. Hamant (1988) identified issues that are critical in the planning process. Policy makers need to establish a high-level planning group that includes researchers, government leaders, school board members, education personnel, and advocacy groups. Decision makers must assure school districts that they will not lose money if they participate in the program, that the effects of removing the top students from the schools will not have an adverse effect on attendance and on overall school achievement records, and that the aura of elitism will be vigorously addressed.

Specialized schools are ahead of the curve relative to the education reform movement in the nation. For example, they are leading in the concept of site-based management. They make local decisions on who will be educated, what the course work will be, and what is the broad spectrum of the curriculum. The faculty members are locally selected, highly trained, and recognized for their competence.

Accountability, typically a critical educational shortcoming, is addressed in specialized schools by providing a superior educational program organized around the special learning needs of gifted students. This is one of the major factors influencing educational achievement. Other factors — peer culture, family practices, and cultural values — are also addressed, though not with as much emphasis.

Research indicates that what students value most highly in residential and specialized schools is the enthusiasm of their peers and the mutual excitement of working with others who are similarly inclined to capitalize on their creative instincts. Students enrolled in residential and special schools for high achievers all agree that they have a greater understanding of what they are doing and why they are doing it. This is education at its best.

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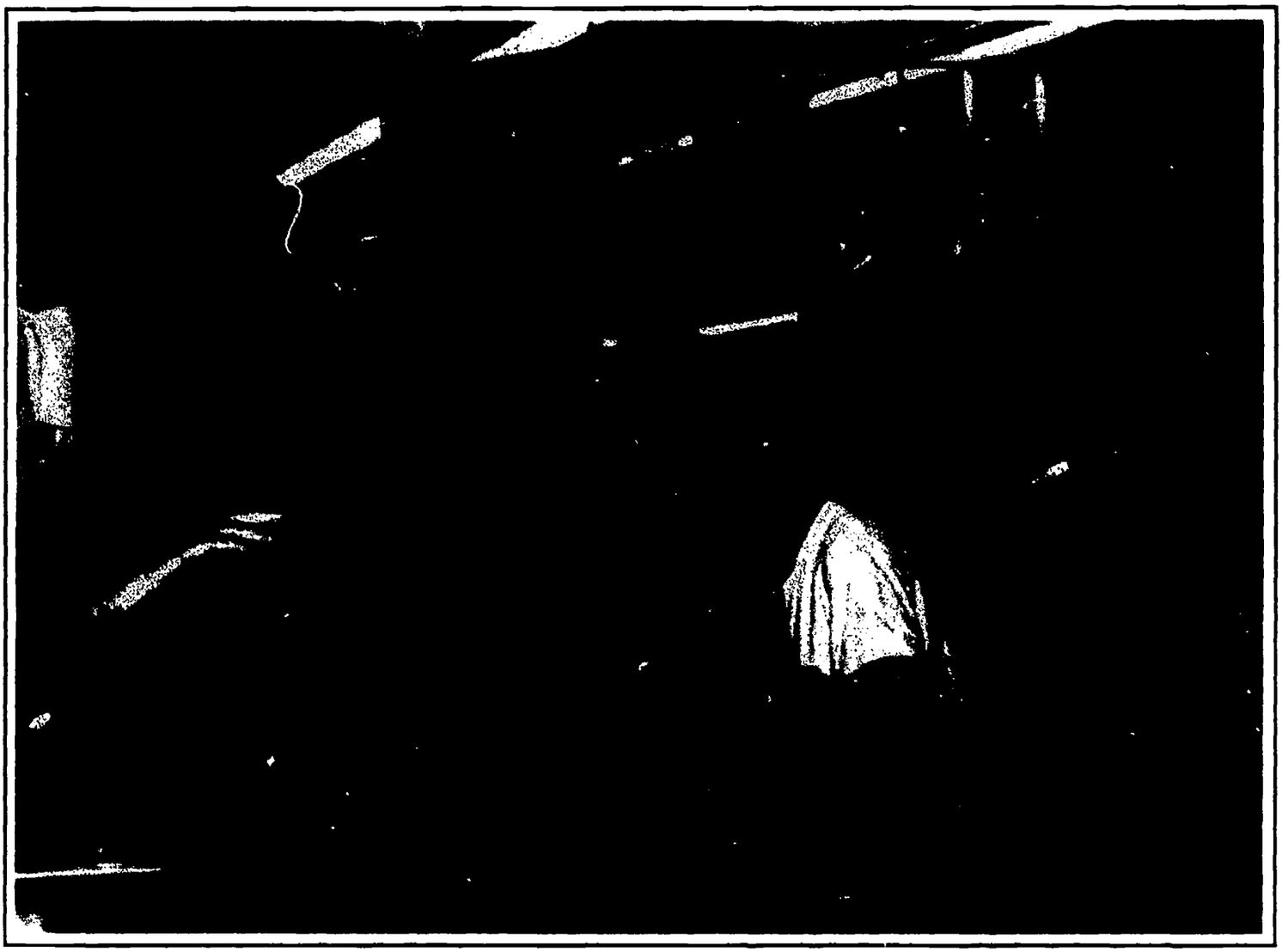

Lead Us Not Into Temptation: Issues in Evaluating the Effectiveness of Gifted Programs

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Note: The author would like to extend his thanks to James Delisle for his collaboration in developing this chapter. Any credit this chapter merits must be shared with him, and any awkwardness in its realization should be ascribed solely to the author.

Introduction

Certainly, it is important to ask program providers about the effectiveness of programs for the gifted. In this field, as in the field of general education, this question is becoming increasingly important. Moreover, the groups asking this question include not only the consumers of gifted education — parents and students — but also funding agencies, state and federal lawmakers, business and industry, and the local community itself.

The trend of evaluation is healthy for the field of gifted education. Too often, in the past, the need to evaluate the effectiveness and efficiency of programs has been ignored. Educators often lacked the vision to measure their objectives or lacked the courage to look at their performance. The current social and political climate will not allow educators to ignore these requests any longer.

Besides the obvious necessity to determine the effectiveness of programs for the gifted for the benefit of students, self-interest demands that educators evaluate what they are doing. In a time of shrinking resources and reallocation of priorities, educators must prove to their constituents that programs for the gifted are important and valuable. If they do not, they may find themselves without programs at all.

In attempting to comply with requests to monitor the effectiveness of programs, educators must be careful to avoid conducting evaluations that ask the wrong questions, oversimplify results, or are so tightly constrained in the information considered that the real goals and objectives are overlooked. The evaluation of gifted programs has, in the past, largely been characterized by these sorts of inadequacies. This is perhaps because doing a bad job of evaluation is vastly easier than doing a good job. There are some fairly seductive temptations that lure evaluators from providing meaningful assessments of program effectiveness.

It is the goal of this chapter to examine the potential pitfalls in evaluating program effectiveness, which not only may weaken the value of our information but also can threaten the existence of the programs themselves. In light of knowledge about these pitfalls, some recent trends in the assessment and maintenance of quality in industrial applications will be presented. Some suggestions about how districts should respond to demands for evaluation will be offered. The consequences of failure to address the issues raised about program effectiveness will also be discussed.

The Temptations of Bad Evaluation

As mentioned earlier, there are a number of temptations that beset the evaluator. Some arise from a desire to please those who demand evaluation, while others arise from faulty assumptions about the purposes of evaluation. Some temptations are appealing because they appear to offer simpler alternatives to complex tasks. In every case, however, the results of such evaluations disguise results and do not provide decision makers with appropriate information.

Asking the Wrong Questions

There is a relatively obvious problem that arises in evaluation: If you ask the wrong question, you will not get a useful answer. In some ways, it is akin to the man who searched for his lost keys under a street lamp because the light was better there than where he dropped them. There are several reasons why the wrong questions are asked.

Sometimes, educators attempt to please an audience that demands program evaluation. The state legislature or the local board of education may ask for effectiveness data that will justify the expense and resources the program uses. They often couch the demand in terms of standardized test performance or normative comparisons. Their request is understandable because aptitude and achievement test scores are widely available and are assumed to be easily understood.

People also are aware that programs for the gifted deal with cognitive enhancement and that some tests provide data that deal with academic ability and attainment. However, reliance on test data alone ignores several problems in using these types of tests with gifted students:

- Gifted students score at ceiling levels and are unlikely to show growth.
- The tests rarely reflect the goals, objectives, or curriculum in the gifted program.
- The tests provide no information about the source and process of learning.

These data sometimes appear to be acceptable because the numbers generated comply with the agency demands for evaluation, but they provide little or no information about actual program effectiveness. Evaluators have told their audience what they seemed to ask but not what they really need to know.

Sometimes the wrong questions are asked because the unique contexts in which programs operate are ignored. In effect, many of the current schemes for evaluation of educational progress fall into this trap. Because programs for the gifted address the needs of students and because student needs differ according to the demographics and resources of each district, evaluation must be sensitive to these differences. Urban and rural school districts have different programs because their students have different needs, and each district has different resources to address those needs.

In an inner city school district, for example, an important goal of the program for the gifted might be the identification of special populations of gifted students. As a result, program options and offerings might have a very different look from a small city or rural programs. In a rural area, on the other hand, a program goal might be to address the lack of experiences available to gifted students. The programs there might include options for obtaining access to information and resources unavailable in the local community. While both of these locations might be concerned with keeping talented students in school or accelerating and enriching their

experiences, the approach either district might take would differ based on the specific reasons gifted students drop out of school.

Contexts also generate unique goals and objectives. While it may seem trivially obvious, the goals and objectives of a program should be examined in any effort to assess effectiveness. Yet, as stated earlier, compliance with funding or regulatory groups' requests may lead to evaluation based on what others think may be valuable. Instead, the priorities and values of the local community should be examined first. The suitability of program goals should be identified and reviewed. Then information that can help determine how effectively these goals are being met should be collected.

The wrong questions also are asked because the desired results are oversimplified. It is assumed, for example, that program objectives for gifted students are neatly packaged into academic goals, affective goals, and social goals. In reality, the situation is far more complex. These areas are interlocked and synergistic. The intellectual gifts or talents of students may facilitate or hinder achievement of other goals. Writers may be self-absorbed and single-minded in pursuit of their craft. Artists may reject social norms and break cultural taboos. Heightened sensitivity, feelings of alienation, or perfectionism are not isolated, unidimensional symptoms that need to be addressed. They are syndromes that include all the elements of a student's intellectual, social, and emotional maturity. Program effectiveness cannot adequately be assessed with unidimensional scales and a few test results, regardless of how tempting it may be to adopt designs that rely solely on such results.

Asking Too Few Questions

Still another temptation for an evaluator lies in asking too few questions. Programs for the gifted are information-rich environments. Faced with the complexity of the settings, evaluators ask relatively few, easily digested questions. Interactions among students and between students and teachers — such as the kind of processes exhibited in classrooms, mentor relationships, and the articulation of programs into regular classroom offerings — offer a mass of data that are useful for evaluation but are often lost, ignored, or uncollected. Sometimes data are not used because they do not fit an overly rigid evaluation design.

Guba and Lincoln (1981) claimed that evaluators who are not attuned to look for "serendipitous" or unintentional outcomes miss some of the most important program achievements. At other times, the information is overlooked because it does not fit the prejudices of the evaluator. Information about dropouts from programs, for example, is often uncollected or ignored, perhaps because such data may be viewed as threatening (Callahan & Hunsaker, 1991). Still other evaluators feel that responsive designs are too subjective and "unscientific." In any case, the unanticipated results of program intervention may have far more beneficial impact than the goals the program was designed to meet. Ignoring evidence because it does not fit preconceptions or assumptions may lead to a distorted view of gifted programs and the loss of valuable program components.

The Pitfall of Summary Judgment

The final and perhaps most dangerous pitfall for assessment of program effectiveness is to view the results of evaluation as a summary judgment rather than a guide for action and refinement. Assessing program effectiveness should be viewed as a sample of a program's current functioning and as a guide for improving services. This view of evaluation, often referred to as formative evaluation (Scriven, 1967), has as its purpose the collection of

information for the purpose of program improvement. Summative judgment is only appropriate if program systems have reached some fixed state of development. Programs for gifted students never reach that state. They must continually develop and respond to changing community contexts and evolving student needs.

Improvement and Assessment of Program Effectiveness

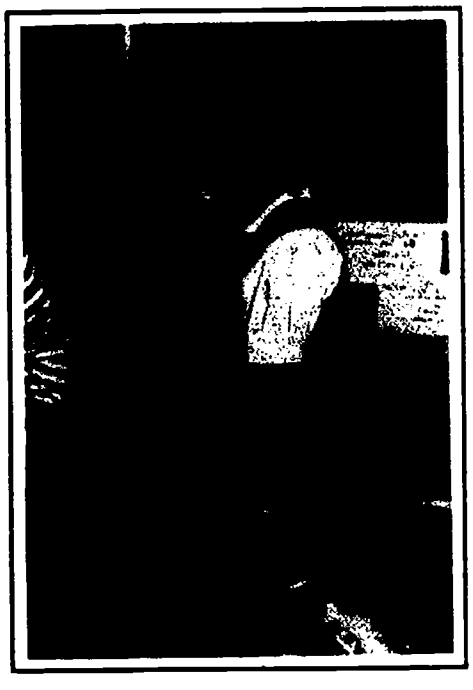
Good intentions, confusion, rigidity of design, and even laziness are factors that can subvert appropriate assessment of the effectiveness of programs for the gifted. What then can be done to guard against the temptations of bad evaluation?

Recently, America has faced challenges from foreign competitors who have provided consumers with products of higher quality at competitive prices. American business and industry has begun to respond by adopting competitors' methods to achieve and maintain quality production. One of the most influential theorists in this area is J. Edward Deming, architect of much of Japan's post-war industrial resurgence and after whom Japan's highest award for industrial quality is named. It is informative to note two of Deming's key points for change (Deming, 1986):

- A commitment must be made for continual improvement of the quality of goods or services.
- Quality is not a target that one hits, but a goal toward which an organization must constantly strive.

The parallel for gifted programs is that educators must realize that services to gifted students must be monitored and assessed continually.

Deming also asserted that an organization is a system of production or service delivery. The components of that system include mangers, workers, suppliers, and customers. The products of the system are governed not by individuals but by the variability of the system itself. A worker, or in this case a teacher, has no capacity to alter the products without basic changes to the system. In Deming's view, assigning merit or blame to individuals is meaningless and counterproductive. Instead, information should be used by workers and managers to alter the system to achieve ever-increasing quality. Information must flow to all parts of the system, and all workers must have input into the mechanism for change. Suppliers and customers also need to be informed and asked for comments.



In the same way, Deming suggested that management by objective and the setting of numerical quotas and guidelines is to nothing to achieve quality. No matter how well-intentioned, they only engender fear and confusion on the part of the workers. Recent efforts in education to find universal statistics for comparison of one district with another, or the exhortations to achieve some numerical goal without systematic change, seemed doomed to failure. What will happen, according to Deming, is the increasing frustration of educators who, despite their best and most well-intentioned efforts, cannot make the current system meet the goals for either regular education or for programs for the gifted. In the same way, systems are unique. Comparison of outcomes from one district to another will similarly result in districts being tagged as winners or losers without regard to their actual attainments.

This is not to say that Deming ignored numerical data. Quite the contrary, his system was based on the analysis of quantitative information. His point, and one that is invaluable for assessing the effectiveness of gifted programs, was that the data should flow to all the constituents of the

system. Furthermore, the data should be used to provide information to persons trying to make decisions about program improvement, what Renzulli (1975) called action and decision makers. Teachers, administrators, parents, and students need to have access to evaluation data in order to improve program quality.

Commitment to Assessing Program Effectiveness

Deming's points suggest that if districts wish to avoid pitfalls and do an adequate job of evaluation, they must make a few simple commitments:

- *The district must serve all identified gifted students at every grade level. and services should be directed toward the individual needs of each student.* Programs will differ as each district differs in its context and student needs, but this commitment will be constant.
- *Services will be constantly improved for every identified student.* As Deming says, quality is not a target that one hits but is a goal toward which an organization must constantly strive. As gifted programs develop, student needs will evolve. The definition of quality service needs to evolve similarly.
- *Evaluation data will be used to meet these first two commitments.* The purpose of evaluation is not the summative judgment about the achievements of any program or program component. Instead, evaluation is a source of information used to strive toward service that is responsive to student needs and is the means to assess the current progress of the program toward quality.
- *The data collected will provide information keyed to program goals, and every effort will be made to gather as much information as possible.* This requires that all of the suppliers, customers, workers, and managers in the system (parents, community, business, students in and out of the program, school staff, teachers, and administrators) be involved. While some of this information may include locally developed and nationally standardized test results, it will also include information from discussions and surveys of all the groups mentioned above. Each of these constituents has a unique view of what is working in the system, where potential problem areas lie, and where priorities lie for change.
- *Information collected will be disseminated to decision makers and to all the audiences who might profit from it.* Evaluation data that flow only to regulators or that result in summative judgments or meaningless exhortations to do better are worse than useless. Such data only function to generate fear and confusion among those who are responsible for carrying out the improvement of the program.

The Future

The field of gifted education has not had a particularly good record in conducting the kind of evaluation of program effectiveness that these commitments would guarantee. As a consequence, educators face some difficult questions from legislators, businessmen, community leaders, parents, and students. If they continue to ignore these questions, it is practically inevitable that the level of service to gifted students will be reduced or that control of these programs will be lost to those posing the questions. Equally disturbing, however, is the prospect of acceding to the requests in a way that provides useless and misleading information.

If educators are forced to provide only the information about effectiveness that is currently being required, two things will happen. The first is that the scope and vision of programming will be reduced to the limits imposed by standardized test results and numerical quotas. The second is that educators will be unable to demonstrate the extent and interrelationship of

other needs to the point that these needs will no longer be valued as goals for programming. A lesser vision of needs will result in programs that have lower priority and almost certainly lower positive benefits. Ultimately, programs will be less effective at achieving even more minimal goals.

In either case, it will be the students who are penalized. Educators have the responsibility to educate as well as evaluate. Programs that are effective do far more than raise test scores or teach knowledge and skills. It is up to each educator to design evaluations that illustrate the needs of gifted students and that assess the effectiveness of programs in meeting all of those needs.

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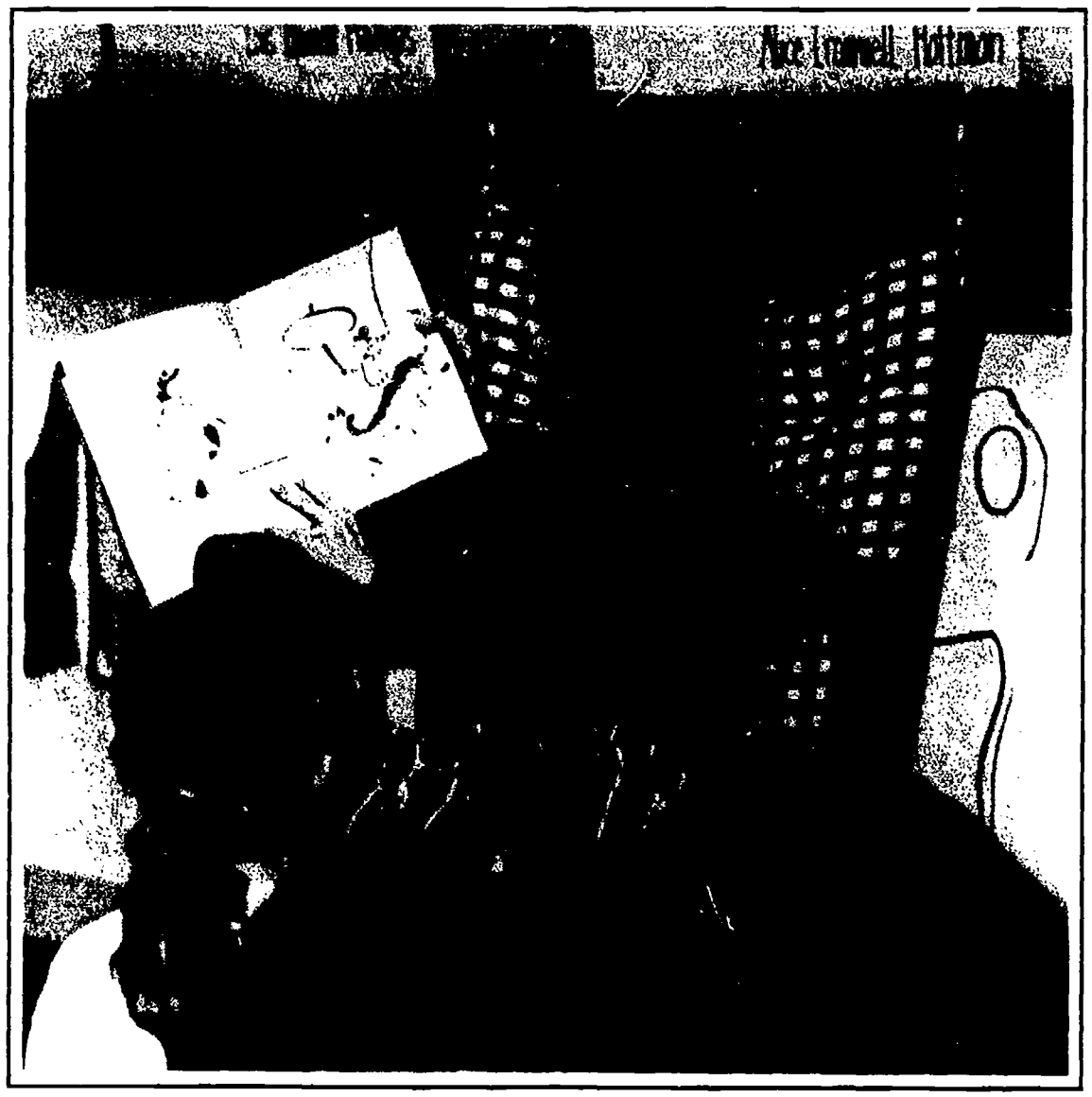

Determining the Effectiveness of Educational Services: Assessment Issues

Carolyn M. Callahan — *Professor of Educational Studies and Associate Director of the National Research Center on the Gifted and Talented, University of Virginia*

Introduction

Determining the effectiveness of educational services is predicated on the assumption that evaluators know what to look for as reasonable indicators of success, that they know how to assess change on those indicators and that they know how to interpret that change when it occurs. These assessment issues continue to plague evaluators, teachers, administrators, and parents involved in programs for the gifted.

Limitations of Standardized Instruments

One of the lingering problems facing those who attempt to determine the effectiveness of programs for the gifted is the selection or construction of instruments that will yield reliable and valid information. A second, related problem is the determination of meaningful indicators of success acceptable to those who must use the information for decision making.

These problems stem from several sources, one of which is the mismatch between existing standardized instruments and the goals and objectives of programs for the gifted. Existing standardized achievement instruments have been criticized for their narrowness, invalidity in assessing program goals, and potential ceiling effects.

Narrowness of Assessment

Standardized tests are designed to assess the traditional curriculum. Test developers go to great lengths to ensure that the standardized tests reflect the predominant curricular goals at the appropriate grade level nationally. This results in very specific assessment across traditional curricular areas within a narrow range of expectations. The selection of both the content and the level of thinking required to answer the questions on standardized tests reflects the aim of assessing those areas to which most students are exposed in their traditional curricula.

This stands in contrast to the broad and extended goals of programs for the gifted. These goals encompass such skills as the development of creative and critical thinking and the development of independent learning skills. In addition, the content of most gifted programs falls under the rubric of "enrichment" (content not normally included within the traditional course of instruction) or "acceleration" (content normally taught at a higher grade level). On-level standardized tests, those tests given to students based on their age, are not effective in assessing either knowledge of content or the level of thinking acquired by gifted students.

Invalidity in Assessing Program Goals

This narrowness of assessment leads to a validity issue. *Validity* is a term used to describe the degree to which a test assesses what it is intended to assess. A test may be valid for one purpose but not another. Standardized tests are an excellent example of this tenet. That is, standardized t ts might be quite accurate in assessing the outcome of the traditional program because the items closely match the goals and objectives of that program, but they may be very invalid for assessing the goals of a program for the gifted. Even when the standardized tests propose to assess the thinking skills that are now being integrated into all curricular areas, caution must be exercised. Too often, the level of thinking required of the regular student is still very low and not in concordance with the objectives of gifted programs.

When gifted students are in a program based on the acceleration model, the use of standardized tests may be justified if there is a close match between the test chosen and the content to be taught. However, even when the content of the curriculum offered to gifted students is accelerated, the use of standardized assessments presents very particular problems. If on-grade assessments are used, the range of items presented to students will fail to assess the goals and objectives of the program because so few items will go beyond the traditional grade level. If out-of-level assessments are used, the new types of answer sheets, the typeface and size of type, the density of problem presentation, and even the length of the test may interfere with the assessment process unless considerable caution is exercised.

Ceiling Effects

One further problem with using standardized tests is the potential that such tests will not have a sufficient range of items at the upper end of continuum to fully assess student growth. This is a problem particularly when students are identified for placement in a program for the gifted on the basis of high scores on these tests. If a student earns a score between the 95th and 99th percentile on a standardized achievement test, that student most probably has responded correctly to nearly all of the items prior to any instruction at all. Change cannot be measured on these instruments because there are not enough items at a level advanced enough to be sensitive to that change.

Regression to the Mean

High scores on a pretest also will result in a statistical phenomenon called regression to the mean, which may act to hide actual growth in achievement. This effect occurs because all test scores contain some random error. On any given day, an individual may earn a higher or lower score, not because of what the individual knows or can do, but because that person guessed correctly, marked an answer incorrectly, or misread a question. For students who earn high scores, the error factor was in their favor that day. When they take the test again, the error may work against them this time and lower their scores (i.e., cause their scores to regress to the mean), even though they may have gained in knowledge or skills.

The Lack of Suitable Measures Addressing the Outcomes of Programs for the Gifted

Although some measures of critical thinking skills and creativity have been used in assessing the effectiveness of programs for the gifted, these measures are usually limited in scope and address only a few of the many goals of gifted programs. For example, the Torrance Tests of Creativity (TTCT) are considered reasonable measures of the specific skills of fluency, flexibility, and originality. However, many experts question whether scores on these tests are suitably generalized to an assessment of the larger construct known as creativity.

Further, many of these instruments (e.g., the TTCT, the Ross Test of Higher Cognitive Processes, and the New Jersey Test of Reasoning Skills) are used in the identification process; the students are selected for eligibility to programs on the basis of high scores on the tests. Thus, if these same instruments are used to assess change, ceiling effects and regression to the mean effects may interfere with the assessment of true change.

The number of instruments specifically designed to evaluate the goals most common in programs for the gifted is also very limited. This is not surprising in light of the complexities of gifted programs and the drawbacks of developing instruments for such programs. Test development and publication are extremely expensive and require considerable distribution

to warrant the investment. The market simply does not exist for instruments that assess the outcomes of gifted programs.

There are no "national" or "state" curricula or even objectives for programs for the gifted. Even in those areas where there might be agreement on general goals, such as the development of creativity and higher-level thinking skills, there is little commonality in definition; little agreement about the appropriateness of a given skill for a given grade level; and no common content base, except in some acceleration programs and in advanced placement courses. In many programs based on individual programming models and independent study, there may not even be a common set of goals for all gifted students served by the same program, such as a program based on individual student needs. Creating standardized assessment tools under these conditions would be a futile effort.

Alternative Assessment Strategies

Locally Developed Assessment Instruments

Locally developed assessment instruments are the logical alternative. Unfortunately, few school personnel have the expertise in instrument construction to collect appropriate evidence of reliability or validity of instruments, to establish reasonable norms and standards, and to avoid the tendency to create very content specific instruments. Finally, in programs that are individualized in nature, it is nearly impossible to identify one instrument that will assess the myriad of goals that might be part of the educational programs of even a small number of students. However, with some investment of time and effort, data from local instruments provide useful information, especially if used as indicators of success (see "Multiple Assessment").

Out-of-level Assessment

As suggested above, assessing a program that is based on acceleration may be accomplished by out-of-level testing. But out-of-level assessment should occur only when the objectives assessed by the level of the instrument selected match instructional objectives. Even when that match is clear, care must be taken at certain grade levels to ascertain that the format of the test does not interfere with performance.

For example, in testing second graders on upper-level forms of the Iowa Tests of Basic Skills, the format of answering on separate answer sheets was found to be new, confusing, and ultimately inhibiting to performance. Some standardized tests use much less "white space" on upper-level tests, and younger students may find the page layout very distracting. Also, students accustomed to being able to answer all or nearly all of the items on a test can become very frustrated with a test that has more difficult items. All of these observations suggest that careful examination of the test objectives, the format, the instructions, and the length of the test must precede use of the instrument.

Multiple Assessment

One of the tools used by evaluators to assess programs is a procedure called triangulation. This technique is used when the evaluator does not have a perfectly controlled design, a perfect instrument, or perfectly unbiased sources of information. The term "triangulation" evolves from the strategy used to locate a position or point when surveying; the essential principle is to use multiple indicators from multiple sources to assure consensus on the finding. This concept can be applied to assessing student outcomes by thinking in terms of multiple assessment strategies, multiple measures, and multiple scorers or raters.

For example, in assessing the student outcomes in a program that emphasizes creativity, the following measures might be used:

- A standardized test such as the TTCT, assuming it was not used for identification, might be used to assess some of the related skills that are specifically addressed in the program.
- A product rating scale, completed by 'experts" in the discipline of the product, with a dimension specifically focused on characteristics of student products that are creative in nature may be used as one additional source.
- A process rating scale, completed by the teacher to rate the steps engaged in by the students in creative production, can provide further data on the achievement of goals.
- A self-rating scale on self-perceptions of changes in skills related to creativity might be completed by the students.

Comprehensive examination of all of these data points will generate a better assessment of the overall construct.

Assessment in Nontraditional Areas and in Traditional Areas Using Nontraditional Means

There are some disciplines in which the use of any standardized instrument, especially any standardized paper and pencil assessment, is totally unwarranted. These disciplines include the visual and performing arts and leadership. Although a growing number of individuals would argue that all paper and pencil assessment is artificial and uninformative, regardless of the discipline, the development of portfolio and performance assessment tools is critical to gain an authentic assessment in the arts and leadership areas.

Assessment tools can relate to *processes* involved in creation or execution in these arenas or to *products* that are generated. In either case, the development of these tools requires careful examination of goals, careful delineation of categories of behaviors to be rated or evaluated, and extremely careful selection and training of raters. A machine can score a correctly marked answer sheet, but experts must rate processes and products. The expertise must be twofold: the ability to judge the kind of product or performance and the ability to evaluate the work of students of the particular age group assessed.

Use of product and performance evaluations is becoming much more prevalent. The technology that is being developed for general assessment should be used to improve instruments in the gifted arena. For example, the statewide performance assessment program of Connecticut has included attempts to assess many outcomes that are parallel to those of gifted programs, such as products that reflect real-life solutions to problems or creative solutions to problems.

The Standards Issue

Even when appropriate instruments are found, when change can be assessed over time, and when assessments are deemed reliable, several nagging problems remain. Are the student outcomes that have been achieved better than "nothing," are they better than other gifted programs, or do they meet the standards set for gifted students in a given program or the highest criteria set in the field?

The assumption that the "program for the gifted" is being compared to "no program" is always unfounded. Some educators assume that if there is no formal program for the gifted, there is no program at all. In reality, the question of whether the formal program is "better than nothing" is not a

question because the gifted students will still be in school in *some* educational program even if a formal program does not exist.

So, should the effectiveness of a program for the gifted be compared to other formal programs, to outcomes of the regular curriculum, or to a set of standards or criteria? To what degree is the formal program responsible for meeting the highest standard set by experts in the field of gifted education? To what degree is the formal program *only* responsible for achieving the goals that have been set, even if those goals are inadequate for gifted students and their education? These are values issues that must be examined before undertaking any evaluation process.

Effect of National Achievement Standards on Assessing Gifted Student Achievement

One of the current waves in the reform movement is to set local, state, and national standards for achievement. Many states have already set minimum standards for advancement to high school or for graduation from high school, and several federal officials are proposing national examinations. The most significant negative potential of this movement is that the minimum standards set by such tests will come to be seen as acceptable for all students when, in fact, these standards and examinations fall far short of assessing the predominant goals and objectives for gifted students. The current formats do not even provide reasonable benchmarks that might be used to assess educational achievements of gifted students. Educators involved in gifted programs have a responsibility to become involved in setting standards and to look beyond minimal standards and measures for gifted student assessment.

Changes in Grade Equivalency Scores as Standards

It is tempting to set changes in grade equivalency scores on standardized tests as standards for gifted program assessment. Aside from the validity issues raised above, it is important to recognize that grade equivalency has little meaning for academically gifted students. The concept of grade equivalency is based on differences between the scores of average students across grades. There is no index for assessing reasonable change in grade equivalency scores for gifted students in programs or not in programs over the period of an academic year.

Another faulty assumption is that a given change in grade equivalency is the same regardless of where it occurs on the scale. That is, growth of 1.2 years at one level is considered equal to growth of 1.2 years at another level. In fact, grade equivalency scores are *not* interval scores, so the same change may represent varying degrees of learning or change.

Use of Control Groups to Determine Outcomes

When evaluators have tried to assess the effectiveness of education programs, they traditionally have compared the achievement of students receiving special services with those who are not receiving special services. However, the use of control group comparison in evaluating the effectiveness of services to gifted children has not been accepted because it would mean that some gifted children would not receive services. Educators have been reluctant to restrict access to gifted programs.

Even when control groups are identified, the assessment of program effectiveness is hampered by internal variance within each group. The variability in aptitudes, outside factors affecting the children in the group, teacher instructional competencies, and many other undetermined factors may, in fact, outweigh or interact with the effects of the program.

Solutions to this problem have focused on two strategies: using students as their own controls and using matching control groups. Typically, using students as their own controls involves single subject designs that gather

baseline data on outcome measures, institute instructional intervention and measure outcomes, stop interventions to measure outcomes, and repeat the intervention. This kind of assessment might be used in evaluating models such as the "Revolving Door" component of Renzulli's Schoolwide Enrichment Model. Comparing projects completed while a student is "revolved in" to projects completed as part of regular classroom instruction (using criteria established as goals for the model) demonstrates the differences in types of projects produced while in the special classroom setting and shows the influence of the program on other projects.

Use of Qualitative Evaluation Strategies

The traditional evaluation model assumes that one instructional program is equally good for any gifted student who has been identified. The programming strategies, instructional activities, and evaluation strategies that have been used all assume that one type of program will be equally effective for all gifted students. What may, in fact, be the case is that certain programming strategies and curriculum are effective for certain gifted students having certain characteristics but are not effective for others.

Evaluation designs have not accounted for these effects. Evaluators have not examined the possibility that what is described as the "same" instruction is really quite different from each individual student's perspective and, thus, has quite different effects on individual students in the same program.

It is time to consider using qualitative evaluation strategies in conjunction with quantitative strategies in determining the effects of programs on individual students. Evaluation strategies must provide the opportunity to describe the ways in which gifted students interact with the experiences provided for them, with their teachers, with the way programs are delivered, and with the outcomes they experience. Qualitative studies are needed to determine what works for which individuals under which conditions, what the other intervening factors are that influence success, and how the program deals with those factors.

Gifted Children: Making the Year 2000 Theirs

Frederick J. Weintraub — *Assistant Executive Director for Communication, The Council for Exceptional Children*

Almost 25 years ago, half of my life ago, I was invited to lunch at the National Press Club by Roy Millenson, a member of Senator Jacob Javits' staff. "The Senator would like to do something on behalf of the gifted," he said. "What does CEC suggest and what are you willing to do to make it happen?"

I remember returning to The Council for Exceptional Children (CEC) office knowing little about the gifted and probably less about politics. I shared my concern with the late Bill Geer, CEC's executive director, who responded with "DO it." A year later, the first federal legislation for the gifted and talented was passed and I embarked on a career as a lobbyist for students with exceptionalities.

A friend once said that change is merely a result of time and circumstances. That may be true; however, advocates can seize upon the conditions of the time, creating the circumstances necessary to achieve the objectives for which they advocate. Those of us who are committed to a better future for our nation's gifted and talented students should not be limited by what may appear to be a nonsupportive political environment.

As I read the preceding chapters, a number of insights emerged. First, the field of gifted and talented education has a rich history of significant accomplishment. Second, a sound body of knowledge exists to guide effective education for these students. Third, we have evidence that special educational programming produces better learning. And finally, there is a vision that can guide us toward a better future.

Why, then, are we so far away from extending appropriate learning opportunities to all students who are gifted and talented? And, why are existing programs at risk in this era of economic constraint and educational restructuring?

While there appears to be a common vision for the future, there is a corresponding lack of clarity regarding who we are. Is there a field of gifted and talented education? Do we hold common values and beliefs? Do we support each other? Are we part of the field of general education or special education, or are we separate? What are the ties that bind us together? As I talk with professionals and parents in the area of gifted education, the lack of a coherent identity becomes increasingly evident. Often, the result is a lack of trust, an inability to find a common purpose and, more important, the lack of an identity in the political world of decision making.

Advocates in the area of gifted and talented education do band together, primarily in times of great strife. For example, the Coalition for the Advancement of Gifted Education (CAGE) was formed in the early 1980's when the Gifted and Talented Children's Educational Assistance Act was repealed. CAGE's purpose was to unite the diverse gifted and talented organizations for the purpose of defining an appropriate federal role and developing a lobbying force to achieve that role. Building consensus and trust among members of these groups, although difficult, was achieved. The Jacob K. Javits Gifted and Talented Students Education Act was the outcome of that truly collaborative effort. Once the law was passed and

funding realized, everyone went their separate ways once more. The battle had been won, but advocates failed to see it as part of a much larger war. Maintaining the status quo is not sufficient. Rather, members of the gifted and talented community must unite to shape and achieve a common vision for the future education of our most able youngsters.

Individuals with strong beliefs sometimes presume that others share their beliefs or, with appropriate indoctrination, will come to embrace their beliefs. Thus, we continue to be surprised when educators, politicians, and others behave in ways that are inconsistent with our beliefs. Our dream of a world where the interests of children and youth with exceptionalities are given priority status is far from reality. Therefore, we must, like other minority interests, work together to create the policies, resources, and advocacy necessary to assure continuing appropriate behaviors on the part of decision makers who have the power to impact the quality of education for students with exceptionalities.

In a field of limited resources, it is difficult at times for people to rise above the needs of self in order to advocate for the common good. For example, parents who struggle to have the needs of their child met, often have little energy left to advocate for other children. Similarly, the competition in the marketplace for economic survival often drives many well-intentioned people to promote their ideas, products, models, and organizations, to the detriment of others. The result is that the market of opportunity for children does not expand, a market that if fully developed would allow for the needs of many individuals to be met.

The ongoing debate in gifted education — developing children's abilities for their own intrinsic purposes versus preparing children to fill the economic and social needs of our nation — while intellectually stimulating, has little political value. The political milieu of our nation swings between the interests of the individual and the interests of the state. In the current political environment, gifted and talented education should be promoted as a means of developing the talent that will enable us to compete in a global economy. In the future, a message of individualism and self-fulfillment may be emphasized. We will truly continue to be hostage to changing times and circumstances unless we are willing to use them for our benefit.

This is a time of great risk and great opportunity. We know how to identify and educate students who are gifted and talented in ways that will increase their educational achievement. We have the knowledge to better serve the increasing number of students who are ethnically- and culturally-diverse, and culturally disadvantaged. We know that our nation is in trouble because we have not invested in developing all our children's talent. And we know that for the first time there is a high level of national energy, regardless of how misguided it may be, devoted to achieving better outcomes. The challenge to us is "carpe diem" — seize the day.

The citizens of Ohio in developing *Interacting for Quality Learning: A Gifted Education Strategic Plan for the 1990's* (Ohio Department of Education, 1991) have shown that individuals with diverse interests can unite to chart a course for the future. Similar efforts should be taken in each state and at the national level. Such planning must be forward-thinking and relevant to the current school reform and political climate.

As we promote greater inclusiveness in our schools, we must be able to build and strengthen a gifted advocacy community whose members, regardless of their diversity, share common values and commitments. A balance of professionals, parents, and others who have a stake in advocating

for our children is needed to fight the battles. Advocates for persons with disabilities and advocates for the gifted and talented have a great deal in common and, together, offer great potential for impacting the political system in positive ways.

The problems of American business will not be solved by complaining about the Japanese and other competitors, but rather by actively meeting the needs of American customers. So, too, must members of the gifted and talented community become activists, proposing viable solutions to the needs of the political marketplace.

Instead of competing with ourselves for scarce resources, we must begin to compete in the marketplace for a larger share of the total resource. To do this requires an understanding that we will not succeed solely by our good ideas, deeds, or intentions, but rather by the size, quality, and unity of our advocacy.

Change that would have been unfathomable not too long ago has occurred in recent years. That change was driven by people who had a vision for the future and who were bold enough to take the necessary risks. This is what we teach our children in gifted and talented education. They should expect no less from us.

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The activity which is the subject of this report was supported in whole or in part by the U.S. Department of Education. However, the opinions expressed herein do not necessarily reflect the position of the U.S. Department of Education, and no official endorsement by the U.S. Department of Education should be inferred.